

## **Truax Landfill Part II: Toxic plume under the landfill, going towards Well 7: Who is responsible?**

*The Truax Landfill saga was based on reviews of old newspaper stories (from NewspaperArchive.com), publicly available government reports, and hundreds of government reports and communications obtained through open records requests. Given the many missing, withheld and/or incomplete public records—and numerous internal communications that were not written and therefore off the public record—there are a variety of unknowns and gaps in this story, and uncertainties about the accuracy of various details. Citations are removed. If you have questions about this history, know about details I didn't include, and/or are interested in sources for any of specific points in the story, please email mariapowell@mejo.us.*

### **In the late 1960s, city began monitoring the landfill**

In 1968, groundwater monitoring wells were installed at the Truax landfill as part of a research study contracted by the City of Madison to investigate “existing and new landfill site locations.” The city was looking for new landfill space, and was apparently also concerned about pollution at its existing landfills. The research, done by the University of Wisconsin Water Resource Center and Geology Department, was “to measure the vertical gradients of the groundwater under the fills and possible pollution of the groundwater by the fills.” A UW doctoral student, R. J. Kaufman, led the work, and in 1970 published his dissertation, “Hydrogeology of Solid Waste Sites in Madison, Wisconsin.”

At the end of 1971, a feasibility study by another consultant hired by the city, Bill Warzyn, assessed whether the Truax landfill could be extended onto the old Burke sewage site. Citing Kaufman’s research, he noted, “groundwater levels in lagoon areas fluctuates considerably...most probably attributed to the nearby well pumping” and in the lagoon area, groundwater flowed in three directions—west to Packers Avenue, Southeast to Aberg Avenue, and “into the perimeter ditches leading eventually to Starkweather Creek.” He concluded that “[m]arked pollution is noticeable below and immediately adjacent to the sludge lagoons” and this “may be important in developing the area as a landfill site.” Kaufman’s research also showed that the heavy pumping of Oscar Mayer and the city municipal wells was drawing landfill leachate downward into the deep aquifer. Presumably, these studies informed the city’s decision not to expand the landfill onto the Burke site.

### **City confirms two groundwater plumes under Truax Field**

In 1972, just a year before the landfill was turned over to the county by the city, the DNR permit document said that on average, 700 tons of material daily and 18,000 tons monthly were accepted there. When it closed, it contained 1 million cubic yards of municipal waste, 970,000 of which were disposed of by the city.

There’s relatively little in old records from the years just after the county took over ownership of the landfill in 1973. Landfills began receiving increasing regulatory attention after the 1980 passage of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund. That year, City of Madison engineering expanded its ongoing groundwater monitoring at the Truax landfill (it also had been testing Oscar Mayer wells). In 1981, City of Madison engineer Dave Benzschawel met with DNR to discuss the “existing status of DNR’s position on Truax and existing groundwater legislation which might affect the City’s study

there.” The DNR confirmed that because the landfill was closed before the legislation was issued, “no monitoring or reporting is required.” Nevertheless, the city installed another well later that year based on “previous studies which indicate inadequacy in data collected to date.”

By 1982, according to a DNR memo about a meeting with city engineering, city data indicated that the leachate plume was “moving” and was “strong enough to justify a further study” that would also include heavy metals.” The memo noted that Starkweather Creek, running along the east side of the landfill, used to be a “gaining stream... [t]hat is, it used to receive part of its flow from the groundwater.” However, “[t]hese days it is a ‘losing stream’ because high capacity wells to the west (City of Madison) and to the southwest (Oscar Mayer) have induced recharge from the stream to the aquifer.” Most notably, the memo stated that “the contamination appears to be moving west while the City of Madison well was actively used. Now that well is pumped only intermittently, most contaminant flow appears to be toward the Oscar Mayer well...”

The city informed the DNR that it had found contamination in the monitoring wells near the landfill, and in 1983 installed gas probes for a gas migration study there.<sup>1</sup> Later in 1983, as the city was preparing the “preliminary” Truax Landfill Leachate Study, volatile organic compounds (VOCs) were discovered in two water utility supply wells.<sup>2</sup> The Mayor organized a task force, including City Engineering and the Health Department, to study the problem.

#### **1984 City engineering Truax Landfill leachate study**

In the next several months, the city tested groundwater at the landfill as well as Oscar Mayer’s Well #5. In January 1984, City Engineering compiled the preliminary Truax Landfill Leachate study document, which included data and maps on plumes beneath the landfill and Burke sewage treatment plant. While recognizing that the county owned the land, and DNR didn’t require monitoring, the authors explained that “the City Health Department has an interest in the Truax Landfill because they are charged with protecting the environment of the City of Madison according to City Ordinance Sec. 7.46 and 7.47 which includes ground and surface water.” Dane County commissioners also listed these city ordinances in their 1983 Starkweather report as authorities the city has to address pollution sources to the creek.

The city’s 1984 landfill report drew on Kaufman’s dissertation. “Kaufman’s studies indicated that despite the strong downward gradient in the landfill and sewage plant area, water on the eastern edge of the landfill is discharged locally to the ditch system and marsh” and “the City’s monitoring from 1970 to present confirms that the flow patterns mapped by Kaufman still remain the same.” All groundwater data from 1968 to the present “confirms the presence of two groundwater plumes”—one from the former landfill and the other from the former sewage plant. Because the

---

<sup>1</sup> At the end of 1983, gas migration investigations documents said that strong gas odors were detected at Shopko. Early the next year, a DNR memo reported an anonymous citizen query about the “ammunition dump in a bunker” located at the landfill. Having heard about the explosion near the Greentree landfill, the citizen “was concerned that methane and ammunition have the potential to create a significant problem for residents in that area.” The DNR contacted the National Guard, which said the only thing that was stored there were personal items such as campers, etc.—“no ammunition or flammable materials.” The city fire department had apparently inspected the bunkers just weeks before and “found nothing of a flammable or explosive nature.” At this point, the bunker area was still owned by the city but was “to be transferred to Dane County,” who would be “assuming responsibility for the site in the near future.”

<sup>2</sup> The document said they were Water Supply Wells No. 4 and No. 6. It’s not clear where these wells were.

landfill had no clay liners and no leachate collection system, authors concluded, “[a]lmost all leachate percolates downward until it reaches the groundwater table...”

The city engineer highlighted the former Burke treatment plant leachate as the biggest concern, because it was closer to city water supply wells, and was “fed by the south irrigation field and the sludge lagoons,” where Oscar Mayer wastes were stored year-round through 1976.<sup>3</sup> Based on limited available data, city engineers calculated, the Burke plume had likely traveled well offsite to the neighborhood west of the landfill/sewage plant.<sup>4</sup>

The city report, however, also pointed to significant concerns about the Truax landfill leachate. City data showed clearly that it had migrated well off of the landfill site and groundwater flow patterns showed that it had probably reached Oscar Mayer Well #5 and would reach the City Well #7 “within 10-20 years.” It concluded. “At this point, no contamination has been detected, but the leachate will invariably reach the well ...depending upon the well’s pumping rate.”

City officials advised that more data be gathered on nitrates, organic contaminants, manganese, cadmium, sodium and chlorides in the leachates “because of their potential for exceeding the drinking water standards.”<sup>5</sup>

### **Truax landfill report shared with Oscar Mayer and Dane County**

City and DNR notes and timelines about what happened in early 1984 are conflicting, but it was clear that as more data came in from the Truax and Oscar Mayer wells, the city became increasingly concerned about its potential responsibilities and liabilities and began trying to blame the county and other entities for the contamination. Tensions between the city and county ramped up.

On January 13, after compiling the draft report, city engineers met with the Dane County Director of Public Works to inform him of the “City’s concern for Truax groundwater since the County owns the landfill.” In the following months, cadmium, iron, manganese and chloride, ethylbenzene, toluene, and xylenes, as well as PCE, TCE, and DCE were found at the property line of the landfill—most at or over existing state standards. Significant levels of PCE and TCE were also found in Oscar Mayer’s Well #5.<sup>6</sup> On May 1, the finalized report was presented to the Mayor, his staff, the city attorney, and Director of Public Works, and on May 4 it was presented to Oscar Mayer.<sup>7</sup>

---

<sup>3</sup> Other records indicate that it was 1978.

<sup>4</sup> Internal city timelines state that VOCs had been found at the Truax landfill by the end of 1983

<sup>5</sup> The city also gathered data on the “quality of sanitary wastes” from Oscar Mayer in 1966 and 1967, finding “exceedingly high” nitrogen and phosphorus levels. The organic nitrogen in Burke plant sludge was 1600 mg/L. The levels in the effluent discharged to the north and south irrigation fields were much less, 15 mg/L, but still very high for surface water. These fields drained to Starkweather Creek. Chloride levels were 770 mg/L. For comparison, currently according to [EPA](#), the “acceptable range” of total nitrogen in surface waters is 2-6 mg/L.<sup>5</sup> The [DNR](#) water quality standards for chloride, based on aquatic life toxicity, are 395 mg/L (chronic) and 757 mg/L (acute).<sup>5</sup>

<sup>6</sup> At the landfill property line wells, cadmium, iron, manganese, chloride, and ethylbenzene also exceeded drinking water limits (which were different than the “state law AB-595” limits). PCE and TCE didn’t exceed the drinking water standards at the time, but exceeded current standards; PCE was 12 ug/L (the limits became more stringent over time as more toxicology research was done on these compounds).

<sup>7</sup> It is very odd that PCBs were never analyzed in any medium from the landfill, given what was dumped there. It is hard to believe that this wasn’t a purposeful omission.

On May 18, 1984, Dane County Executive Jonathan Barry wrote to Mayor Joe Sensenbrenner: “I am informed by my staff that the city has recently completed a study it commenced some time ago regarding possible groundwater pollution near the old city landfill site located at Truax... I know you share my concerns regarding protecting the quality of our groundwater resources, and I trust that the city will share the results with DNR and seek their advice as to what action, if any needs to be taken in response to the findings. I am sending a copy of this letter to the DNR so that they know to expect your prompt action on this matter.”<sup>8</sup> He also sent copies of the letter to the press.

### **Report goes public, city and county quibble over who is responsible**

On May 23, 1984, lead city engineer Arnold Milke shared the final Truax Landfill report, dated April 30, 1984, with the DNR as well as Dane County, Oscar Mayer, and Ed and Dave Reynolds, sons of former Madison Mayor Henry Reynolds, who owned part of the Burke site.<sup>9</sup>

The report started out by touting the city’s proactivity in assessing the leachates under the Truax landfill and Burke plant, but concluded by claiming that the City Engineering Division “has no responsibility for the long-term care of the Burke Sewage Treatment Plant” even though “the City Health Department has been assigned the responsibility for protecting the environment, which includes groundwater.” Not unexpectedly, the bottom line was cost. It is “questionable whether the City Health Department should spend money studying the leachate plume from the Burke Treatment Plant since it is owned by someone else, it was operated for a considerable amount of time by Oscar Mayer Company and it is probable that the only well to be contaminated by the plume is Oscar Mayer Well #5.” City engineers recommended that the city “leave the treatment plant” alone and ask the County pay for an expanded landfill monitoring program to assess organic contaminants and heavy metals.<sup>10</sup>

On May 30, 1984, the Wisconsin State Journal reported that “harmful substances have spread underground from the former Truax Field landfill...and from the former Burke Sewage Treatment Plant sludge water irrigation fields south of the landfill.” The city director of environmental health, Jill Schmidt, told the State Journal: “We’re not worried today, but some action may be needed in the future...” If pollutants reached unacceptable levels, “possible remedies include treating ground water by pumping it to ponds for purifying aeration, closing wells and sinking new ones, or removing the sources of contaminants.” Oscar Mayer said it voluntarily shut down the contaminated well (presumably Well 5), but production wouldn’t be hurt because “the company simply will use more water from its other wells and from the city.”

---

<sup>8</sup> According to the city’s timeline, the Mayor presented the finished Truax report to Barry on May 10, and on the same day of Barry’s letter to the Mayor, May 18, the city engineer met with the Dane County Director of Public Works, corporation counsel, and the airport manager to discuss the study.

<sup>9</sup> Another document said the “ownership of the Burke Sludge beds is divided among two Sons of Henry Reynolds, Shopko, and the County.” Henry Reynolds was Madison Mayor from 1961-1965. He ran for mayor again in 1975 (unsuccessfully), against Paul Soglin; a Capital Times article that year said he was a millionaire by that point. His sons Ed and Dave bought this the southwest part of the property with the sludge beds (just northeast of the HW30/Packers interchange) in 1981.

<sup>10</sup> The final section included list of contaminants to assess, including “organic contaminants (to be selected).” This could include chlorinated solvents such as PCE and TCE used at Oscar Mayer for decades. Again, it is very notable that PCB testing was not recommended.

Battles ensued about who was responsible. A few days after the State Journal story, the Capital Times reported that “attorneys for Dane County and the City of Madison are at odds over who should pay for any corrective measures that are necessary to combat a ground water contamination problem near Truax Field.” City engineer David Benzschawel, author of the landfill report—in contrast to statements in the report—now publicly downplayed the seriousness of the issue, assuring that the “leachate is not moving at an alarming rate” and “levels of contaminants “are no different than anything we’re finding at city wells all over town—even ones that aren’t near landfills.” The city is only involved, Benzschawel explained, “because it could affect city wells.”

The city attorney added that the current owners of the property, Dane County and the Reynolds brothers, had “primary responsibility for taking any corrective measures the DNR might order.” The county attorney said it wouldn’t accept financial responsibility “since it had nothing to do with pollutants at either site. “I think the city is manufacturing their line on liability...”

Behind the scenes, the city also began looking for other potentially responsible entities that could contribute financially—particularly the U.S. military. On June 20, city engineering staff met with representatives from the U.S. Army Corps of Engineering, who told the city the military had funds to help clean up environmental problems resulting from their use of old military bases—but for the city to be eligible it would need to document of military waste filling at the landfill. Further, he noted, the terms of city leases with the military and Oscar Mayer would be important in determining the military’s involvement; he indicated that the city may not have indemnified itself from liabilities.

Four months later, a joint meeting of the city and county public works departments was held, attended by numerous representatives from both entities, the mayor’s office, attorneys from each, and the airport. The meeting was clearly very contentious. The County Public Works Director Ken Kosciuk argued that city and county should split the costs 50-50—the county would deal with the methane problem and the city with the landfill leachate issue. A city attorney, in response, argued that “the City’s responsibility in this case is none,” because “the law does not state that it is retroactive responsibility to the previous owner, but that it is to the present owner of the landfill.” The city Public Works Director Jerome Franklin argued that this depended on the legal interpretation of the state law. He argued that the county should take full responsibility, but with city oversight.

Several meeting attendees brought up how Oscar Mayer and the military could contribute to the cleanup costs, and an airport administrator suggested that MMSD might also share costs because the Burke Treatment Plant may be contributing to the leachate plume in the groundwater under the area.

City Engineer Arnold Milke said the city agreed that “something should be done to correct the situation” and “a discussion can be continued on moral obligation to do something in the area, but he felt something should be done now, not to wait until all the disputes are settled, the problems are of such importance that waiting for decisions could be hazardous...[t]he leachate problem is a long complicated issue and should continue, and not have to be “set aside” until differences are settled.”

### **DNR asks for more information and more testing**

DNR Bureau of Solid Waste Management staff's internal notes on the city's 1984 Truax landfill leachate report raised questions about missing maps and details in the report. One DNR reviewer suspected that the analysis was designed to shift blame away from the landfill, writing: "General impression—Trying to show contaminants from sludge beds not landfill?" On July 5, the DNR wrote the city asking it to provide the missing information and conduct more investigations on how far the contamination had spread towards other Oscar Mayer wells and Well #7.

According to a July 27 memo, Dave Benzchawel told a DNR staffperson that "the main purpose in submitting the [Truax landfill leachate] report was to see who the DNR addressed the reply to" and since the DNR "sent the reply only to the City, the city attorneys will not allow a technical response or meeting." The city's negotiations with the county would "probably take at least a year," he added, and in the meantime the City Health Dept. would continue to monitor.<sup>11</sup>

On August 1<sup>st</sup>, city engineer Arnold Milke responded to the DNR's July 5 letter. He said the city has "neither the authority nor the resources to conduct the additional research you request." Since the city doesn't own the landfill site and "it goes beyond the scope of the data collection necessary to insure the quality of our water supply" it is "not able to conduct this additional research." He forwarded the DNR's letter to the Dane County Director of Public Works, and assured the DNR: "We are sure Dane County, as owner of the Truax site, will respond appropriately to your request...we will cooperate with the County to insure a prompt response."

### **The toxic debacle and city-county bickering go public**

A couple of weeks later, on August 12, 1984, Thomas Waller reported in the Wisconsin State Journal that "traces of organic chemicals and four undesirable heavy metals" had been found in another Oscar Mayer well and "a city groundwater monitoring well north of the plant has gone dry" (presumably this was Well 152, which Benzschawel said was "bad").<sup>12</sup> Reflecting its July 5 letter to the city, DNR said it wanted more monitoring to understand how far contaminants had spread.

City officials were clearly annoyed, and the city-county bickering was aired publicly. "The DNR missed the point of our report," Dave Benzschawel told Waller. "They agreed with our recommendation, but they didn't address the issue of who's responsible" since, he argued, it isn't clear which pollutants came from the landfill and which came from the sewage plant. Further, another city engineer reiterated, the city "has neither the authority nor the resources" to do the research DNR was asking for, and Dane County should do it because it owns the former landfill site.

County Executive Jonathan Barry responded that "the county will do no such thing" because it would be difficult to determine the source of the pollution and responsibility, and "the

---

<sup>11</sup> Benzchawel also said the city's monitoring well #152 just west of Packers Avenue in the Sherman neighborhood "is bad." Bernard Saley's testing data from the 1970s-1980s indicate that this well was filling up with sediments and/or was contaminated.

<sup>12</sup> The DNR's notes seemed to question this claim, indicating that perhaps it was actually contaminated

county is not responsible for what went into the landfill. “The city appears to be trying to dump the whole thing on us.”<sup>13</sup>

Oscar Mayer officials appeared only minimally concerned at this point. The company’s public relations director said they were checking their wells monthly, and if their “shallow wells” became polluted beyond federal standards, “the company will buy all the water it needs from the city, which has deeper wells.”<sup>14</sup> We would “certainly feel the added cost of production, but it would not stop us from doing business here,” he assured. At that point, eighteen percent of the company’s water came from the city, and purportedly (according to company officials) none of the remaining water, including from the two contaminated wells, was used for food processing or drinking.

Benzschawel glumly concluded that “the problem appears too expensive to remedy...the wells can be used until they go bad and that’s it.” If the problem couldn’t be remedied, the city might have to relay water from other city wells to the Northeast side, possibly by building an expensive water main.

### **DNR cites laws, city questions their authority**

A few days after the State Journal article was published, Benzschawel called DNR, informing staff there that the county would not negotiate with city attorneys (or vice versa) until the DNR said the county was liable for the site. He also said the Mayor’s office changed its mind about continued monitoring at the site and may “cut or curtail monitoring” because they felt the county should do it.

DNR met internally to discuss how to resolve the city and county bickering, and in September the agency sent the city and county a letter reaffirming the legal basis for their July 5 monitoring requests. “Section NR 180.13(11), Wis. Admin Code,” it began, authorizes the Department to require the owner or operator of landfill sites to monitor “to detect the effects of leachate on groundwater” and also to require sampling of public or private wells to determine the extent of groundwater contamination. A new statute, created by 1983 Wisconsin Act 40, authorized the Department to require testing of landfills that are no longer in operation by “special order.” “the letter concluded by stating that the city, which previously owned and operated the landfill, and county, current property owner, are jointly responsible for this.” In October, a meeting of the Board of Public Works for the city and county was held, and in November a “resolution” was passed “that the Mayor [Joe Sensenbrenner] meet with the County Executive to finalize an agreement concerning Truax.”<sup>15</sup>

The city continued to resist DNR’s efforts to deem it responsible for the landfill investigations and remediation. An internal memo in early 1985 from the assistant city attorney to the mayor’s assistant, Director of Public Works and lead city engineer questioned DNR’s legal authority. Based on her review of a report to the Legislature prepared by the DNR, titled “Locating and Repairing Abandoned Waste Sites,” the attorney opined that the “implementing rules” for these

---

<sup>13</sup> The State Journal explained that DNR had authority to fine responsible parties, or promulgate rules to enforce groundwater law, but “the law is so new the rules have yet to be developed.”

<sup>14</sup> According to early articles about Oscar Mayer wells, and the 1989 Envirodyne report, most of Oscar Mayer wells were over 700 feet deep.

<sup>15</sup> Behind the scenes, the city had also contacted MMSD about their potential responsibility and met with the county to negotiate.

laws were not finalized yet and therefore were just recommendations. She warned city officials, however, that “the DNR may be looking to municipalities such as Madison to lend a hand in cleaning up landfill sites within their jurisdictions, regardless of owner or operator liability...and it looks like they will be advocating changes.” Her memo seemed to imply that the city had not been negligent in any way while operating the landfill, and therefore would not be held liable.<sup>16</sup>

In February 1985, five DNR staff met with three city staff to talk about addressing city landfills, including Truax.<sup>17</sup> The city stuck firmly to its argument that because it was not the current owner of the landfill, it had no responsibility—only the county did. The city also argued that with the Oscar Mayer wells pumping at much higher levels than the seasonally-used city Well #7, the water was being drawn toward them--and consequently, away from the public well, so it would not be affected.<sup>18</sup>

### **Unless someone spends some money, “this leachate problem will not go away”**

A few months later, on May 15, a joint city-county board of public works meeting was convened to discuss the methane and leachate problems at the landfill and what to do about them. According to the notes, an additional well placed at the landfill since the 1984 study “indicated that the leachate was leaving the site at virtually the same strength it entered mainly because there was no clay liner installed in the bottom of the site at Truax to collect leachate.” Leachate was “leaving the site in the upper area in the sands and had reached depth of the bedrock levels—down about 250-300 feet—and was travelling along the bedrock layer.” The current monitoring wasn’t good enough to understand if leachate was leaving the site and moving towards the Oscar Mayer wells, “but it is known that the Oscar Mayer water supply wells’ groundwater is degrading.”<sup>19</sup>

---

<sup>16</sup> The DNR’s report to the Legislature proposed that the DNR do a “hazard ranking, negotiate with responsible parties to arrange for cleanup” of landfill sites or “use available Superfund and state fund resources to do the cleanup.” However, the attorney opined, the report “does not suggest that former owners and operators have legal responsibility when they have not been negligent in their former operation of the site...based on the model employed by the federal government in allocating responsibility under Superfund.” She went on to say that most site cleanups are conducted by responsible parties through negotiated agreements...due in part to the strong liability language of Superfund... Under Wisconsin’s Environmental Repair Law, negligence or illegal activity on the part of the responsible party are the determining factors for liability.”

<sup>17</sup> At that time, there were 31 waste sites in the city that had gas and groundwater contamination problems, but the six major sites were: Truax, Demetral, Sycamore, Olin, Greentree, and Mineral Point.

<sup>18</sup> The city engineer again said that Well 152 had gone dry, but DNR notes said “data from 152 suspect.” Notes indicated that this was because the well was “probably constructed of metal” and “was a driven well point that was put only in 2-5 feet of the water table and “85’ unit suspected of carrying the leachate.” Notes also said “#7 is in the upper aquifer, NOT the bedrock” (emphasis in original) and “there is a groundwater trough running which runs north to south, somewhat west of the site.” (this refers to the pre-glacial river valley)

<sup>19</sup> The contamination wasn’t only coming from the landfill. The “prime suspects” for the contamination in Oscar Mayer wells, according to the report, were the Truax landfill, the Burke Treatment Plant “which has been operating since 1910 and which had sludge lagoons without liners and had irrigation fields with no liners in the bottom, and a third area of possible contamination around the railroad corridor, where there has been industrial and commercial development (some of the pollutants which are showing up in the wells are possibly from the areas which were filled with waste around that property dating back to the beginning of their development, in the 1920s-30s). One of the wells in that area was closed down temporarily and drilled to a lower depth because it showed organic contaminants coming in from the stockyard areas.”



County Board of Public Works Director Ken Koscik argued that the leachate problem should not be put off. “There is now enough information to agree that there is definitely a leachate problem and someone has to spend the dollars for the study to see what is happening. Until the money has been expended by someone, this leachate problem will not go away.”

**To be continued in Part III...**