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## **ENVIRONMENTAL RACISM ON TUCSON'S SOUTHSIDE: AN OVERVIEW OF THE TUCSON SUPERFUND SITE AND A CALL TO ADDRESS NEW CHEMICAL CONTAMINATION**

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*Since the 1970s, the term “environmental racism” has become more commonplace in the public sphere and is largely recognized when governments and private industry aim to develop or use land for their own interests at the expense of the health and safety of the communities that reside nearby. This is a positive development in the evolution of dialogue on the environmental impacts on communities of color. Equal attention should also be paid to instances of environmental racism before the term became widely known. One such example is the Superfund site in Tucson, which sits near the city’s majority-minority southside. Federal contractor Hughes Aircraft Co., with the Tucson Airport Authority, spent nearly three decades disposing of a degreaser containing a toxic chemical, trichloroethylene (TCE), which then leaked into the groundwater supply. While this took place largely before the term was coined, a retrospective demonstrates that the release of the TCE, intentional or not, resulted in many residents developing cancer or other illnesses, and falls under the definition of environmental racism. Although the litigation settled over 15 years ago, problems persist in the communities surrounding the Superfund site. In addition to the still ongoing TCE cleanup, a new contaminant, polyfluoroalkyl substances (PFAS), has emerged, brought on by the Air National Guard’s use of firefighting foam, showing up in water wells close to the Tucson Airport Remediation Project (TARP). The state and federal governments have an obligation to act quickly to prevent the spread of PFAS in the water remediation system and avert a repetition of environmental harms on communities of color.*

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## I. Introduction

With neighborhoods composed of a nearly 78 percent Latino population,<sup>1</sup> southside Tucson residents have historically been on the margins, facing economic, racial, and social disparities.<sup>2</sup> This is also true when confronting the realities of environmental disparity. From 1952 to 1981, Hughes Aircraft Co. (“Hughes”) regularly disposed of a degreaser in the Tucson International Airport Area (TIAA).<sup>3</sup> The degreaser, later determined to contain the toxin trichloroethylene (TCE), seeped into the soil and the groundwater used to serve drinking water to residents on the south side.<sup>4</sup>

After the Environmental Protection Agency (EPA) established a Superfund site,<sup>5</sup> and three decades of cleanup after the fallout of the TCE contamination, a new set of contaminants, polyfluoroalkyl substances (PFAS), has emerged in the remediation wells that feed the Tucson Airport Remediation Project (TARP) treatment plant.<sup>6</sup> The TARP plant is the site where the affected groundwater is treated for TCE, but the emergence of PFAS in these wells could again pose a hazard to residents.<sup>7</sup> While the EPA plays a vital role in the cleanup effort, the state is also able to act quickly in addressing the presence of PFAS to prevent repeating events of the twentieth century. The state demonstrated this ability by supplying two million dollars to reopen the TARP treatment plant.<sup>8</sup> If federal and state governments’ response times drag on, the lack of action could

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<sup>1</sup> U.S. ENVTL. PROT. AGENCY, TUCSON INTERNATIONAL AIRPORT AREA SUPERFUND SITE: COMMUNITY INVOLVEMENT PLAN 4 (Jan. 2020), [hereinafter *Community Involvement Plan*], <https://semspub.epa.gov/work/09/100019560.pdf>.

<sup>2</sup> *Id.* The average household income in the area is \$36,190, compared to the statewide average household income of \$56,213. *QuickFacts: Arizona*, U.S. CENSUS BUREAU.

<sup>3</sup> Angelo Lavo, *Tucson’s Groundwater Problems are Not New, Neither are the Lawsuits*, TUCSON DEL SUR NEWS (Aug. 25, 2019), <http://tucsondelsur.news/2019/08/tucsons-groundwater-problems-are-not-new-neither-are-the-lawsuits/>.

<sup>4</sup> *Id.*

<sup>5</sup> 42 U.S.C. § 9601 *et seq.* Formally titled the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), the Superfund law allows the EPA to investigate and establish Superfund sites. A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Counsel in private tort suits (such as the residents who sued Hughes Aircraft Co., Tucson Airport Authority, and the City of Tucson) can use the findings and designations of Superfund sites by the EPA in their claims.

<sup>6</sup> Lavo, *supra* note 3.

<sup>7</sup> *Id.*

<sup>8</sup> Tony Davis, *Tucson Shuts Water Treatment Plant, Gets \$2 million from AZ to Help It Reopen*, ARIZ. DAILY STAR (June 22, 2021), [https://tucson.com/news/local/tucson-shuts-water-treatment-plant-gets-2m-from-az-to-help-it-reopen/article\\_0f9abe3c-d2c8-11eb-8179-c33d518efef4.html](https://tucson.com/news/local/tucson-shuts-water-treatment-plant-gets-2m-from-az-to-help-it-reopen/article_0f9abe3c-d2c8-11eb-8179-c33d518efef4.html).

affect south Tucson residents' health and display the neglect that minority communities have experienced for decades as a result of environmental racism.

In order to see how the Superfund site serves as an example of environmental racism, it is essential to establish various criteria. First, the foundation of the Superfund site will establish why this event and the litigation surrounding it involve environmental activities that disproportionately affected minority communities. Second, it is necessary to define the term "environmental racism" to determine the criteria required to classify an event or activity as environmental racism. Lastly, applying the definition to the events that led to the designation of Tucson's Superfund site will show that this neglect fits into the realm of environmental racism. Responding efficiently to recently discovered PFAS emerging at the site is necessary to prevent exacerbating existing health issues in the area's predominantly Latino community, and a repetition of environmental racism in these neighborhoods. Additionally, retroactively applying criteria of environmental racism will allow for lessons that keep government and private industry from committing similar mistakes in the future.

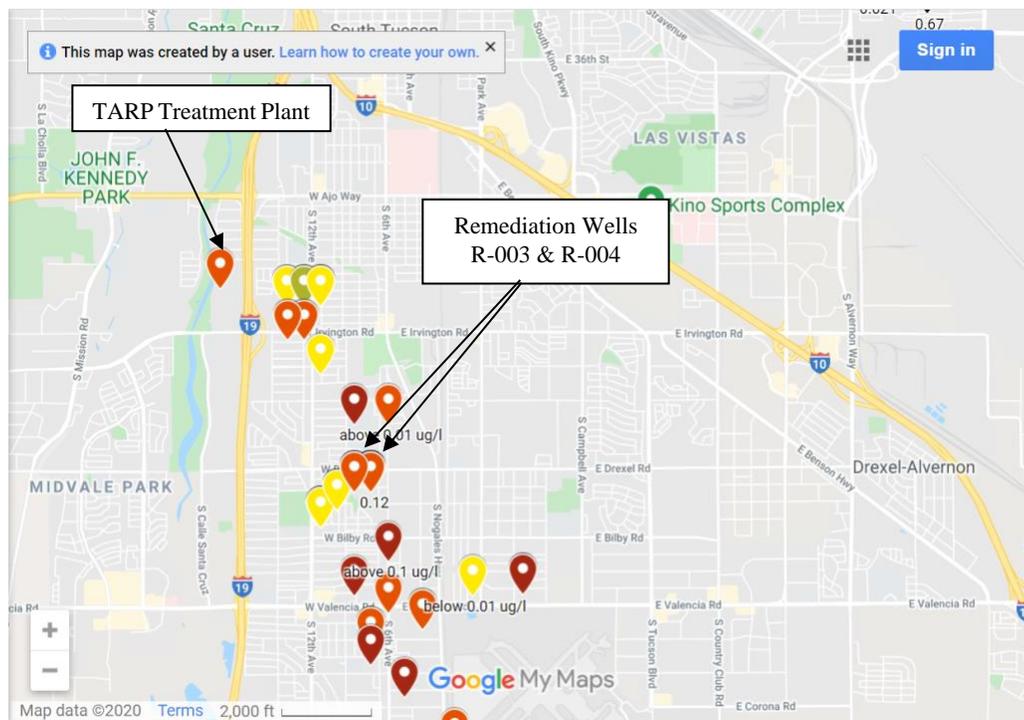


Figure 1. This screenshot shows the two remediation wells that tested for higher concentrations of PFAS above the EPA advisory level, and their proximity to the Tucson Airport Remediation Project (TARP) treatment plant.<sup>9</sup>

## II. History and Litigation

Hughes Aircraft Co., a government contractor, used a degreaser on metal aircraft parts and disposed of it by dumping it into unlined ponds and ditches, where it seeped into the groundwater.<sup>10</sup>

<sup>9</sup>Angelo Lavo, *New Contaminants Emerge from South Side Superfund Site*, TUCSON DEL SUR NEWS (Sept. 23, 2018), <http://tucsondelSUR.news/2018/09/new-contaminants-emerge-at-south-side-superfund-site/>.

<sup>10</sup>*Yslava v. Hughes Aircraft Co.*, 845 F. Supp. 705, 707 (D. Ariz. 1993).

The city then pumped the groundwater that served residents in a four-mile stretch on the south side of the city that sprawled from the current Superfund site northwest to the intersection of Irvington Road and the Santa Cruz River.<sup>11</sup> The Air Force designated the TIAA a Superfund site in 1986.<sup>12</sup> Cleanup at the site began in 1989.<sup>13</sup>

When it came to light that the TCE in the degreaser being dumped by Hughes contaminated the groundwater used by the south side residents, a barrage of private tort litigation against Hughes Aircraft Co.,<sup>14</sup> and the Tucson Airport Authority ensued.<sup>15</sup> The plaintiffs contended that the TCE in the degreaser contributed to various cancers, heart conditions, and lupus in either themselves or deceased family members.<sup>16</sup> The parties settled the last of the litigation in 2006. The various lawsuits collectively cost Hughes, the City of Tucson, and the Tucson Airport Authority approximately 120 million dollars.<sup>17</sup>

While the litigation has been long settled, the south Tucson community still feels the impact of Hughes' negligent behavior today. The Superfund site continues to be a National Priorities List (NPL) site,<sup>18</sup> although during the last five-year review in 2018 it was shown that the cleanup efforts have reduced the amount in parts per billion significantly since beginning in 1989.<sup>19</sup> Unfortunately, this does not erase the neglect with which Hughes disposed of its used degreaser—containing TCE—so close to a populated area. As often happens, the victims of this neglect reside in a majority-minority area, and in the case of the discovered PFAS the very same population faces potentially hazardous consequences without swift action.

### III. Defining Environmental Racism and Application to Tucson's Superfund Site

The term environmental racism originated in the 1970s and has grown in use in the decades since, especially with the growing urgency of climate change.<sup>20</sup> Benjamin Chavis first coined the term in a speech in 1978 during a rally opposing a proposed landfill that would bring toxic waste to a predominantly black neighborhood.<sup>21</sup> Chavis defines the term as:

- (1) Racial discrimination in environmental policymaking.
- (2) The deliberate targeting of racial and ethnic communities for environmental facilities.

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<sup>11</sup> Lavo, *supra* note 3.

<sup>12</sup> U.S. DEP'T OF THE AIR FORCE, FINAL AIR FORCE PLANT 44 REMEDIAL ACTION PLAN, RESPONSIVENESS SUMMARY AND RECORD OF DECISION 78 (APR. 3, 1986), <https://semspub.epa.gov/work/09/156825.pdf>.

<sup>13</sup> U.S. ENVTL. PROT. AGENCY, FACT SHEET: TUCSON INTERNATIONAL AIRPORT AREA SUPERFUND SITE CLEANUP UPDATE SUMMER 2018-SUMMER 2019, at 3 (July 2018), <https://semspub.epa.gov/work/09/100009197.pdf>.

<sup>14</sup> *Yslava*, 845 F. Supp. at 707.

<sup>15</sup> *Gerardo v. Tucson Airport Auth.*, PCSC No. 247622.

<sup>16</sup> Lavo, *supra* note 3.

<sup>17</sup> *Id.*

<sup>18</sup> *Superfund: National Priorities List (NPL) Sites – by State*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/superfund/superfund-national-priorities-list-npl> (last visited Feb. 18, 2022). A National Priorities List (NPL) site is “the list of sites of national priority among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation.”

<sup>19</sup> FACT SHEET, *supra* note 13.

<sup>20</sup> WGBH, *Environmental Justice: Opposing a Toxic Waste Landfill*, PBS LEARNINGMEDIA, <https://az.pbslearningmedia.org/resource/envh10.sci.life.eco.envracism/environmental-justice-opposing-a-toxic-waste-landfill/> (last visited Feb. 18, 2022).

<sup>21</sup> *Id.*

(3) The disproportionate presence of point generation sources of toxin.<sup>22</sup>

Each criterion merits individual evaluation. The chemical disposal into unlined ponds and ditches at the TIAA does not fit the first criterion perfectly, as this was not a form of environmental policymaking. However, Hughes was a government contractor, implicitly signaling governmental approval of its chemical disposal procedures. Additionally, the slow rate of response by the EPA to designate the Superfund site and the beginning of the cleanup process is indicative of lesser concern for minority communities. An investigation by the National Law Journal showed that sites with higher minority populations took 20 percent longer to designate as Superfund sites than areas with higher percentages of white residents.<sup>23</sup>

The disposal of degreaser containing TCE may or may not fit into the second criterion, as the deliberate targeting of a minority community is not entirely clear. In *Yslava v. Hughes*, the plaintiffs alleged that “Hughes was aware of the potential for contamination as early as 1957,” after which the company continued to dispose of the degreaser for another 24 years.<sup>24</sup> If true, Hughes’ prior knowledge of a contaminant is both negligent and irresponsible, and what may not have been a deliberate targeting is still a neglectful willingness to accept the consequences of dumping toxins where they could seep into southside Tucson residents’ groundwater.

Hughes’ activity surely fits the third criterion, as the point generation of toxins (PFAS) affected groundwater served primarily to residents in a largely minority portion of the city.<sup>25</sup> The resultant leaking of TCE into south Tucson groundwater is an example of how the location of environmental disaster, whether natural or manmade, disproportionately affects communities of color.<sup>26</sup> The neighborhoods affected by the TCE groundwater contamination are largely comprised of Latino residents.<sup>27</sup>

#### IV. A Call for Action to Prevent a Repetition of Environmental Racism in Southside Tucson

The recent discovery of PFAS near the Superfund site is alarming because the remediation wells feeding the TARP plant could impact the health of south side residents. The TARP plant itself closed in June 2021,<sup>28</sup> and even though the city plans to reopen the plant, it will no longer be used to serve drinking water to customers and will instead draw from an already limited Colorado River supply.<sup>29</sup> That the contaminated groundwater may make its way into other wells is not far-

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<sup>22</sup> *Id.*

<sup>23</sup> Marianne Lavelle & Marcia Coyle, *Unequal Protection: The Racial Divide in Environmental Law*, 15 NAT’L L.J. 3, (1992), at S2.

<sup>24</sup> *Yslava*, 845 F. Supp. at 708.

<sup>25</sup> *Community Involvement Plan*, *supra* note 1.

<sup>26</sup> Kyle Mittan, *Black and Hispanic People More Likely to Live in High Risk Flood Zones*, UNIV. OF ARIZ. NEWS (Oct. 5, 2020), [https://news.arizona.edu/story/black-and-hispanic-people-more-likely-live-high-risk-flood-zones-study-finds?utm\\_source=uanow&utm\\_medium=email&utm\\_campaign](https://news.arizona.edu/story/black-and-hispanic-people-more-likely-live-high-risk-flood-zones-study-finds?utm_source=uanow&utm_medium=email&utm_campaign).

<sup>27</sup> *Community Involvement Plan*, *supra* note 1.

<sup>28</sup> Davis, *supra* note 8.

<sup>29</sup> Tony Davis, *Soaring Contamination Causes Shutdown of Tucson Water Treatment Plant*, ARIZ. DAILY STAR (June 9, 2021), [https://tucson.com/news/local/soaring-contamination-causes-shutdown-of-tucson-water-treatment-plant/article\\_cbdc8044-c7f1-11eb-a3b5-e7261bcdd359.html](https://tucson.com/news/local/soaring-contamination-causes-shutdown-of-tucson-water-treatment-plant/article_cbdc8044-c7f1-11eb-a3b5-e7261bcdd359.html).

fetched.<sup>30</sup> PFAS in groundwater can potentially cause developmental and reproductive issues, as well as testicular and kidney cancer.<sup>31</sup> A failure to act would reflect the sluggish response from the government at the time TCE was discovered in 1981 to the time cleanup began in 1989. Such an unhurried pace could likely trigger a public outcry similar to charges many minority communities made against the federal government, including by southside Tucson residents, in the 1980s and 90s.<sup>32</sup>

There appears to be more concern displayed by both the state and federal governments toward the PFAS situation. The Arizona state government is supplying two million dollars for the city to build a pipeline that will allow the TARP plant to discharge its water into the Santa Cruz River as well as the city's reclaimed water system.<sup>33</sup> On the federal side, the Air National Guard is investigating PFAS groundwater contamination near its base.<sup>34</sup> However, the investigation is not slated to conclude until 2024, with any cleanup of PFAS contamination not beginning until then.<sup>35</sup>

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<sup>30</sup> Tony Davis, *2 Tucson Wells Near D-M Base Found Tainted with Toxic Compounds*, ARIZ. DAILY STAR (June 8, 2019), [https://tucson.com/news/local/tucson-wells-near-d-m-base-found-tainted-with-toxic/article\\_980f30ad-b204-5469-9725-bdc65d898bcf.html](https://tucson.com/news/local/tucson-wells-near-d-m-base-found-tainted-with-toxic/article_980f30ad-b204-5469-9725-bdc65d898bcf.html).

<sup>31</sup> *Id.*

<sup>32</sup> Lavelle & Coyle, *supra* note 23.

<sup>33</sup> Tony Davis, *Tucson Water Seeking Permit to Discharge Water with PFAS Compounds into Santa Cruz River*, ARIZ. DAILY STAR (Aug. 17, 2021), [https://tucson.com/news/local/tucson-water-seeking-permit-to-discharge-water-with-pfas-compounds-into-santa-cruz-river/article\\_0b3f6e26-ffa7-11eb-9fb1-8f537076701b.html](https://tucson.com/news/local/tucson-water-seeking-permit-to-discharge-water-with-pfas-compounds-into-santa-cruz-river/article_0b3f6e26-ffa7-11eb-9fb1-8f537076701b.html).

<sup>34</sup> Tony Davis, *National Guard to Investigate PFAS Contamination in Tucson Groundwater*, ARIZ. DAILY STAR (June 19, 2021), [https://tucson.com/news/local/national-guard-to-investigate-pfas-contamination-in-tucson-groundwater/article\\_917a90b2-ce40-11eb-acc8-23375010f02d.html](https://tucson.com/news/local/national-guard-to-investigate-pfas-contamination-in-tucson-groundwater/article_917a90b2-ce40-11eb-acc8-23375010f02d.html).

<sup>35</sup> *Id.*

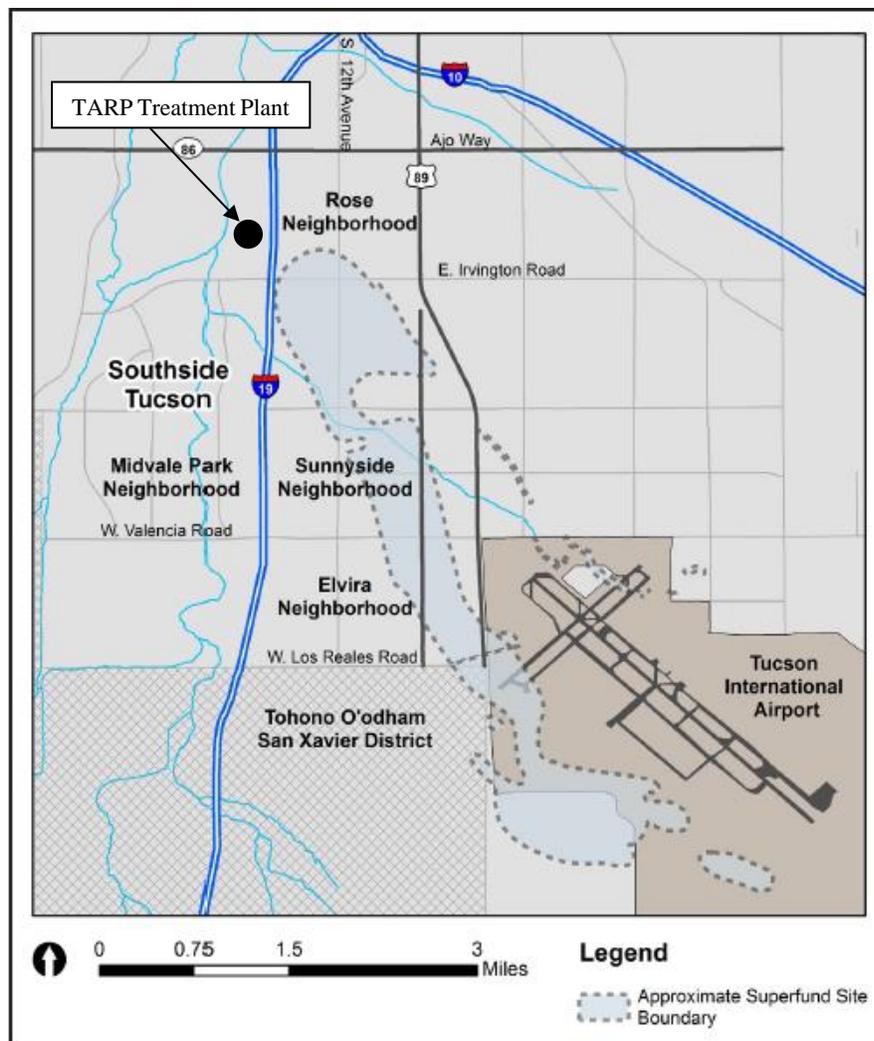


Figure 2. This map shows the boundaries of the Superfund site on southside Tucson, including the neighborhoods that lie within the site. In addition to the airport and the neighborhoods, the site touches on the Tohono O'odham San Xavier District.<sup>36</sup>

On top of moving quickly to remedy to presence of PFAS in the remediation wells, the federal and state governments should prioritize communicating with residents in a clear, transparent, and concise manner. Southside residents are very aware of the history and consequences of the TCE contamination, and remain cognizant of the long-term effects that persist in the area, including cancer in some residents.<sup>37</sup> However, residents have cited poor communication and jargonistic presentations from government officials as a cause of disconnect and mistrust in the community.<sup>38</sup> Establishing a clear line of communication between governmental entities and community members is vital, especially considering the emergence of PFAS, of which southside residents are well aware and expressing concern.<sup>39</sup>

<sup>36</sup> *Community Involvement Plan*, *supra* note 1, at 2.

<sup>37</sup> *Id.* at 5.

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

## V. Conclusion

The history of the TCE contamination of southside Tucson groundwater, from Hughes' degreaser disposal practices to the litigation to the Superfund designation and cleanup process displays the environmental racism that took place in these communities from the 1950s through the 1980s. Taking the criteria from Chavis' definition of environmental racism and applying it to the TCE contamination in south Tucson demonstrates that environmental racism perpetuated negligence and failure on the parts of Hughes, the City of Tucson, and the EPA. At a time when environmental racism is being more broadly recognized, it would be prudent for the federal and state governments to act quickly to remove PFAS from the TARP plant and its remediation wells. This is an instance of how government can set an example in pursuit of environmental justice by reacting in an expeditious and equitable manner. Doing so would not only benefit the health and wellness of the residents—it would show that communities of color are as worthy of swift, lifesaving action as any other.