EARTHJUSTICE

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Fort Bliss Waste Sites and Potential Human Health Impacts at Proposed Migrant Detention Center

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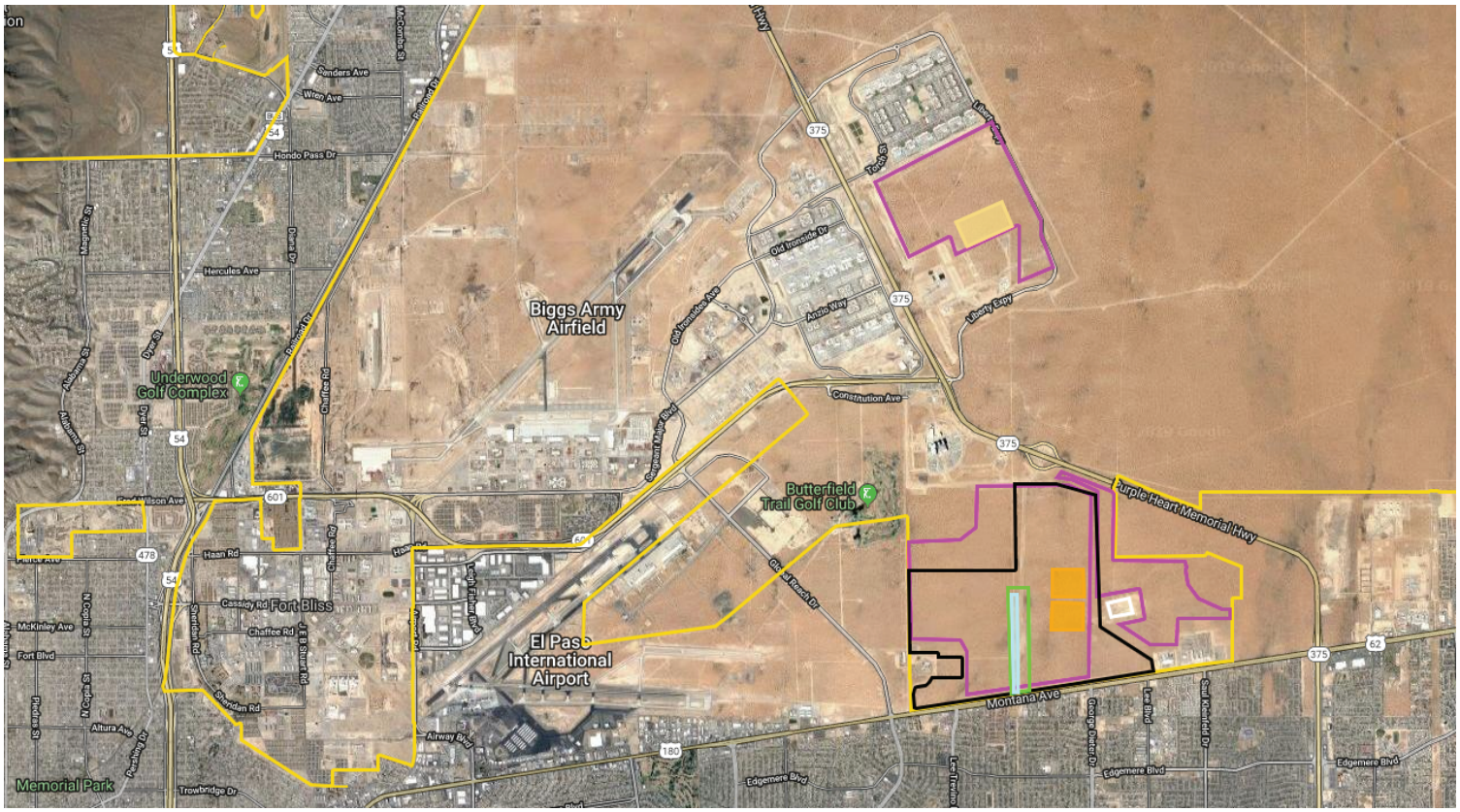
This report reviews documents obtained through Freedom of Information Act (FOIA) requests to the U.S. Army, including emails from the U.S. Army and Department of Homeland Security and various Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) documents addressing Fort Bliss contaminated sites. This report also reviews documents from the Texas Commission on Environmental Quality (TCEQ).

Review of these emails and documents indicate the following:

- The Department of Homeland Security is planning to construct a temporary detention center within Fort Bliss to house migrant families. The detention center will be designed for 4,000 occupants and may increase to 7,500 occupants.
- The likely, but not certain, location is north of Montana Street and west of the Site Monitor, a long disused radio receiver for the base.
- At least 80 sites regulated under the EPA's RCRA and CERCLA hazardous waste cleanup programs have been identified at Fort Bliss.
- The area currently proposed for the housing, "Parcel 2," contains one of these RCRA contaminated sites: an illegal dump and spill site known as the Rubble Dump and Spill Site or simply the Rubble Dump Site. The most recent emails from the FOIA request indicate that the Army plans to build detention center housing only 2,000 feet from this illegal dump. However, the detention center location was not finalized as of the FOIA request, and the final location of the detention center may include the contaminated dump and spill site. See FIGURE 1.
- The Army made efforts to characterize the hazardous waste at the dump and spill site, and some hazardous and construction waste was removed from the surface of the site in 1995 and 1997. Documentation of the levels of hazardous waste at the site prior to cleanup indicated levels of cancer-causing chemicals in soil more than 460 times the level deemed safe by EPA. However, the Army did not fully characterize the site after cleanup, and the cleanup validation sampling was incomplete, particularly for carcinogenic volatile organic compounds (VOCs).
- Post-cleanup soil sampling by the Army at the Rubble Dump Site in 2000 and 2001 indicates that the soil still contains arsenic at levels at least 19 times the safe level for residential soils according to EPA.
- Eighteen years ago, the Army built a fence along Montana Street to prevent unauthorized entry. However, as recently as June 2018, the Army observed unauthorized vehicles when a meeting was held at the Site Monitor.[1] Therefore, additional illegal dumping and spills may have occurred since the cleanup and fence construction 18 years ago.

In sum, the dump and spill areas were not fully characterized, and cleanup was not fully validated. Unauthorized and illegal vehicle entry has not been controlled in the area. Additional illegal dumping and spills could have occurred. Therefore, sampling and characterization of soil, soil gas, and ambient air must be completed, and the area must be deemed safe before the temporary migrant housing for children can be constructed.

Figure 1: Proposed Areas for Migrant Housing



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MAP POLYGON AREAS AND SOURCES

Fort Bliss Base Boundaries

Potential Site (Proposed)
Email 23 - EA_Land Exchange_Parcel_Dimensions

Parcel 1 - Previously Considered
Email 44 - Parcels 1, 2, 3

Parcel 2 - Currently Selected
Email 44 - Parcels 1, 2, 3
Email 23 - EA_Land Exchange_Parcel_Dimensions

Parcel 3
Email 44 - Parcels 1, 2, 3
Email 23 - EA_Land Exchange_Parcel_Dimensions

Parcel 1 Site - Previously Considered
OLD Email 10 - DHHS Site Jun2018

Land Sale Boundary From 2012 Environmental Assessment
Email 23 - EA_Land Exchange_Parcel_Dimensions

Site Monitor
Email 23 - EA_Land Exchange_Parcel_Dimensions

Rubble Dump Spill Site (2012 - Wider Estimate)
Land_Sale_FINAL_FNSI_EA_17Dec12_Rubble Dump Site

Rubble Dump Spill Site
3687229 - RCRA_Rubble Dump Site - Figure 2 (Land Use Map)

Fort Bliss Environmental Background

Fort Bliss was first established in 1854, 165 years ago, and was established as a permanent post 152 years ago. At least 80 contaminated sites regulated under the EPA's RCRA and CERCLA hazardous waste cleanup programs have been identified at Fort Bliss.

As listed in U.S. Army Air Defense Artillery Center and Fort Bliss, Fort Bliss, Texas, Installation Restoration Program, Installation Action Plan, March 2002, these sites include:

- 18 Landfills/Rubble Pits
- 3 Fire Training Areas
- 27 UST/Oil Pit Sites
- 4 Storage Areas
- 6 UXO/Detonation Areas
- 10 Illegal Dump Sites
- 6 Evaporation/Oxidation Ponds
- 6 others

Among these sites, contaminants at a minimum include the following:

- Chlorinated volatile organic compounds (CVOCs)
- Aromatic volatile organic compounds including benzene, toluene, ethyl benzene and xylenes (BTEX)
- Aromatic volatile organic compounds including benzene, toluene, ethyl benzene and xylenes (BTEX)
- Radioactive metals
- Asbestos
- Explosive compounds, including unexploded ordnance (UXOs)
- Per- and polyfluoroalkyl substances (PFAS)
- Semi-volatile organic compounds
- Pesticides and herbicides

Possible Locations for Detention Center

An Army email shows three parcels designated as Proposed Site Parcels.[2] A second Army email shows a closer view of proposed site parcels 2 and 3.[3] Shown within Parcel 2 are two 75-acre rectangles identified as "Potential Site (Proposed)." A subsequent email indicates that Parcel 2 is the selected parcel among the three proposed parcels, stating, "[e]nvironmental document estimated to take 14-21 days, will cover parcel #2."[4] The email also notes a "Request to use Site [M]onitor as a Co-located [sic]between DHS and DHHS, for storage, offices, etc."[5] The two rectangles shown in FIGURE 1 are described in the email as "two 75 acre rectangles within the EA area in close proximity to site-monitor just for reference." Therefore, these rectangles do not show the exact location of the proposed detention center, which may ultimately be elsewhere within Parcel 2.

This is cause for concern because one of the base's contaminated sites, the Rubble Dump Spill Site (SWMU-16), is within Parcel 2. The final location for the detention center might be in or near this hazardous waste site.

[1] An email dated June 29, 2018, contains the most recent received and reviewed information on plans for the migrant housing.

[2] Email 44 - Parcels 1,2,3.pdf

[3] Email 23 - EA_Land Exchange_Parcel_Dimensions.pdf

[4] Hispanic Federation - FOIA Production 5 (BS 23033-23577)_Part22.pdf

[5] *Id.*

Contamination and Health Concerns at the Rubble Dump Spill Site

Information regarding the Rubble Dump Spill Site was not released in the FOIA requests to the Army. Instead, we obtained information about the Rubble Dump Spill Site from the Texas Commission on Environmental Quality (TCEQ), including a Response Action Completion Report for the Rubble Dump Site received by TCEQ in 2001.[6]

As part of its investigation of the site, the Army collected investigation samples to characterize waste and spills found in the Rubble Dump Spill Site. As shown in Table 1 of the Army Response Completion Action Report, 34 surface and shallow soil samples were collected in November 1995 and August 1997.[7] After the Army finished its remediation, verification samples were collected in areas where contaminated rubble and soil were removed. As shown in Table 2 of the Army Response Completion Action Report, one verification sample was collected in December 1999, and five verification samples were collected in January 2001.

These documents indicate that the characterization, remediation verification and site access control have been inadequate.

Some examples follow.

1. Previously Identified Sites Are Covered by Soil

The Rubble Dump Site Characterization Report notes:

> 8.1 Previously Mapped Spill Sites
>
> Two of the four mapped spills located during the November 1995 PA [Preliminary Assessment] field activities were not visible during the August 1997 site characterization (Figure 3). Wind blown fine sand and silt has covered these site[s]. These two sites were eventually located after digging 0.25-0.5 inches below the soil surface. Both sites are located on a dirt road which is topographically 0.5 to 1.0 feet below adjacent debris piles and mounded soil. This situation allows for sand and silt from the adjacent high areas to blow and accumulate into the low dirt road.[8]

Half of the visible sites on the land surface observed in 1995 were not visible 21 months later. Clearly, an investigation that only includes visible sites is not comprehensive and is inadequate. Additional disposal and spill areas could be present in Parcel #2, covered by soil.

Areas in rills and low-lying roads or trails are likely dumping areas and likely areas to be covered with wind-blown soils. At a minimum, these areas must be investigated further, or the site investigation will be inadequate.

2. No Pesticide and Herbicide Analyses Have Been Conducted

The Characterization Report also notes:

> 8.2 August 1997 Observations
>
> Based upon recollections from the 1995 PA field team and field notes taken during the PA, minor dumping has occurred in the last 21 months. This material consists primarily of landscaping debris such as granite pebbles, limestone cobbles, and yard brush, and remodeling materials such as concrete, wood paneling, and ceramic tile.[9]

Even though landscaping debris was dumped at the site, no samples were collected and analyzed for pesticides and herbicides.

[6] 3687229 – RCRA.pdf

[7] *Id.* at 35.

[8] *Id.* at 162.

[9] *Id.*

3. Asbestos Containing Materials

The Rubble Dump Site Response Action Completion Report observes, "The sampling results revealed that 26 of the 50 construction debris samples were positive as ACM [asbestos containing materials]."[10] The report further describes asbestos testing on the site:

> Results for asbestos analyses are presented in Table 3. Fifty samples of floor tile, roofing material and sheet rock were sampled. Chrysotile, one form of asbestos, was detected in 25 of the 30 floor tile samples, in l of the 17 roofing material samples, and in none of the 3 sheet rock samples. Floor tiles were analyzed both on the top and bottom of the sample (see Layer A and B in Table 3). Asbestos concentration ranges from trace to 35% for the 25 floor tile samples that tested positive for asbestos. The one roofing material sample contained 25% asbestos. . . . Of the 26 asbestos containing samples, all are non-friable, greater than 1 percent asbestos, have been subjected to cutting, and are therefore considered a regulated waste.[11]

Even though the asbestos in the ACM found was non-friable, the cutting could allow releases of airborne particles on windy days. Ambient air samples should be collected on windy days and analyzed for asbestos to evaluate if the air is safe to breathe.

4. Volatile Organic Compounds

Volatile Organic Compounds (VOCs), including Methylene Chloride, Acetone, 2-Butanone, and Toluene,[12] were detected in some of the investigation samples, but only one of six verification samples, Ft. Bliss #1, was analyzed for VOCs. This one sample was a composite sample of aliquots from four excavations. Composite soil samples are produced by putting the aliquots into a bowl and mixing with a trowel. The sample is put in a jar following mixing.

This method is inappropriate for collecting a sample for VOC analyses. The mixing process will facilitate volatilization of the VOCs in the sample. This method will likely lead to false negative results, that is, concentrations will be reduced.

Comparing Rubble Dump Site Soil Sample Results to EPA Screening Levels

EPA uses screening levels (SLs), which are based on toxicity data and exposure information, in risk assessment for its Superfund program. The agency uses screening levels to "screen" potential Superfund sites and identify areas and contaminants that need further investigation.

We compared EPA screening levels for residential soil to the maximum soil sample concentrations collected during testing at the Rubble Dump and Spill Site. TABLE 1 presents the results where the measured concentration in the samples from the Rubble Dump Site exceeded the screening level for the sampled pollutant.

These results show both that unsafe levels of contaminants remain in the soil at the Rubble Dump Sites and that testing of soil samples was insufficient to verify adequate cleanup. Thus this limited sampling likely resulted in underreporting of contamination at the site. Of particular concern are the sampling data for arsenic, petroleum hydrocarbons, benzene and volatile organic compounds.

Metals were not measured in the investigation samples, only verification samples. Clearly **arsenic** poses a health risk, particularly regarding cancer. The maximum verification soil sample

[10] *Id.* at 14.

[11] *Id.* at 150.

[12] *Id.* tbl. 1.

concentration is **19 times the cancer screening level** for residential soil. The investigation samples may have had much greater arsenic concentrations than the verification samples. Because the verification soil samples contained arsenic in amounts well above the screening level, the Army must conduct additional testing on the site to ensure that it will be safe for future inhabitants.

Several investigation samples revealed alarming levels of contamination for some chemicals. The maximum total petroleum hydrocarbon (TPH) concentration is **41 times the screening level for inhalation by a child**. A volatile organic compound called benzene is associated with petroleum hydrocarbons. Benzene was only measured in one inappropriately collected composite verification sample. Benzene in the soil and volatilization into the air is a major potential health threat to children. In addition to TPH, arsenic and benzene, **several semi-volatile organic compounds pose a threat for cancer, ingestion, dermal contact and inhalation**. For example, the measured concentration of semi-volatile Benzo[a]pyrene in sample RDS-10 was **468.8 times the EPA screening level for cancer risk from exposure to residential soil**. Despite finding these contaminants at high levels in the initial investigation samples, the Army did not fully characterize the site after cleanup, and the never completed cleanup validation sampling to prove that these carcinogenic VOCs had been reduced to safe levels in the soil. APPENDIX 1 explains the EPA screening levels and the TABLE 1 headers in greater detail.

Table 1: Comparison of Measured Soil Concentrations to EPA Screening Levels for Residential Soil

CONTAMINANT	SAMPLE TYPE	VECTOR	SCREENING LEVEL (MG/KG)	MAXIMUM CONCENTRATION (MG/KG)	QUALIFIER	SAMPLE ID	RATIO
Arsenic, Inorganic	Verification	Carcinogenic	0.68	12.9		RDS-10V	18.97
Benz[a]anthracene	Investigation	Carcinogenic	0.16	8.8	E	RDS-10	55
Benzo[a]pyrene	Investigation	Carcinogenic	0.016	7.5	E	RDS-10	468.8
Benzo[b]fluoranthene	Investigation	Carcinogenic	0.16	8.4	E	RDS-10	52.5
Indeno[1,2,3-cd]pyrene	Investigation	Carcinogenic	0.16	2		RDS-10	12.5
Naphthalene	Investigation	Carcinogenic	3.8	9.9	E	RDS-10	2.61
Total Petroleum Hydrocarbons*	Investigation	Dermal for child	1300	3700		RDS-25	2.85
Total Petroleum Hydrocarbons (TPH)*	Investigation	Inhalation for child	90	3700		RDS-25	41.11

EXPLANATION OF TABLE

- **SCREENING LEVEL** refers to the EPA screening level developed for a given contaminant and vector. The screening level represents a "safe" level of the contaminant in soil, as determined by EPA.
- **MAXIMUM CONCENTRATION** is the maximum concentration reported in the soil samples.
- The **QUALIFIER "E"** means the concentration exceeds the calibration range of the gas chromatograph- mass spectrometer (GC MS). Generally, the GC-MS would be re-calibrated to a higher range and the sample re-analyzed. Apparently, re-analysis did not occur. Given that the instrument range was exceeded, the actual concentration probably is greater than the reported concentration.
- The **SAMPLE ID** is the ID of the soil sample with the maximum concentration.
- **RATIO** is the measured concentration divided by the EPA screening level. A ratio greater than one means the measured concentration is greater than the screening level.

* The laboratory method used to evaluate **TOTAL PETROLEUM HYDROCARBONS (TPH)** was TPH 418.1, which does not segregate the petroleum hydrocarbons by length of the carbon chains. Because of this, the TPH screening levels used in Table 1 are the sum of the gasoline range, diesel range, and oil range petroleum hydrocarbons for a given vector.

Uncontrolled Site Access

Army emails indicate that the Army failed to control access to the site, which the Army knew to be vulnerable to illegal dumping. "A fence was installed along Montana Road and the Site Monitor access road to control access and prevent future dumping."[13] However, Army emails reveal that during a site visit in June 2018, "several unidentified vehicles hastily left the desert when survey group arrived."[14] Thus, 18 years after access was supposedly controlled, unidentified vehicles were observed on the site. Clearly, the fence did not control access to site, and illegal dumping has likely continued to the present day. A previously uncontrolled area with known dumping and spills of hazardous hydrocarbon, metal and asbestos containing materials, selected to house 4,000 or more people, must be investigated thoroughly and contaminant health hazards mitigated prior to constructing and occupying the detention center.

Water Supply

An Army email obtained in the FOIA request discussed water contamination at the site, stating, "Site Monitor: water line has a dead end, could be the cause of contamination; recommend constructing a loop within the site."[15] Although, the emails indicate that DHS planned to provide bottled water for drinking, water for bathing, cooking, and other personal uses may be contaminated.[16] Even if bottled water is supplied, the water supply line should be repaired, or water should be trucked in for bathing and other non-drinking uses.

[13] 3687229 – RCRA.pdf at 11.

[14] Hispanic Federation - FOIA Production 5 (BS 23033-23577)_Part22.pdf at 1.

[15] Hispanic Federation - FOIA Production 5 (BS 23033-23577).pdf at 148.

[16] Part 34, Attachment titled "USA – ROM – 4000 AFH – Fort Bliss – Rev4.xls."

Conclusions and Recommendations

Additional dumping and spills of hazardous materials could have occurred all through the last 18 years anywhere in the proposed Parcel 2 area, as unidentified vehicles were recently observed, 18 years after access was supposedly controlled.

The Rubble Dump Site was inadequately investigated, and its cleanup was not adequately verified. Even though disposal of garden waste was observed in SWMU-16, samples were not analyzed for herbicides and pesticides. No samples were evaluated for dioxin and furans. Only one sample was evaluated for PCBs. Only verification (not investigation) samples were analyzed for metals. The absence of VOCs was only verified with one sample using a faulty sampling method. Spill or dump sites were covered by wind-blown soils and not visible just 21 months later after they were originally detected.

Even though the investigation and verification sampling locations, methods and analyses were incomplete and inadequate, the limited results indicate health risks regarding arsenic, petroleum components and semi-volatile organic compounds. As stated previously, metals were not measured in the investigation samples, only verification samples. The maximum verification soil sample arsenic concentration is 19 times the cancer screening level for residential soil. The investigation samples may have had much greater arsenic concentrations than the verification samples. Also, the maximum total petroleum hydrocarbon (TPH) concentration is 41 times the screening level for inhalation by a child. Benzene is associated with petroleum hydrocarbons. The measured concentration of Benzo[a]pyrene in sample RDS-10 was 468.8 times the EPA screening level for cancer risk from exposure to residential soil.

To provide adequate protection for migrants detained in a camp built on the Army's proposed site, a compete characterization of the soil, soil gas, and ambient air must be conducted for all the possible contaminants and hazardous materials that could be disposed in this uncontrolled area. A safe water supply for non-drinking uses must be supplied. People detained in the migrant detention center would be exposed to possible health risks 24 hours per day. If unacceptable health risks are found, these risks must be mitigated so that people can be placed in safe conditions.

Constructing a detention camp to house 4,000 to 7,500 people is a project requiring proper NEPA documentation, that is, an Environmental Assessment (EA) or Environmental Impact Statement (EIS). Prior to constructing this detention center, NEPA documents must be made available for review and comment by the public and a valid Finding of No Significant Impact (FONSI) generated.

ABOUT THE AUTHOR

James Brinkman RPG has more than 35 years of experience as an environmental scientist and project manager, specializing in hydrology. He has worked in government, private industry, and consulting. He managed multi-million-dollar projects that have included investigation of hazardous and radioactive contamination affecting groundwater, soils, surface water, air, and vegetation. He has managed groups of more than 50 people. He has provided litigation support and expert testimony in lawsuits and hearings in New Mexico, Texas, Arkansas, Louisiana, Kentucky, and Mississippi.

Appendix 1: Explanation of Table 1

TABLE 1 lists all exceedances of an EPA residential soil screening level by a soil sample concentration. Each of the table headers is explained below.

CONTAMINANT

A contaminant is a polluting or poisonous substance that makes something impure. The chemical concentrations in the seven contaminants listed in TABLE 1 were determined by laboratory analyses in soil samples collected at the Rubble and Spill site.

SCREENING LEVELS

The screening levels are provided by EPA at https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables.

EPA describes its screening levels as follows:

> The screening levels (SLs) presented on this site are developed using risk assessment guidance from the EPA Superfund program and can be used for Superfund sites. They are risk-based concentrations derived from standardized equations combining exposure information assumptions with EPA toxicity data. SLs are considered by the Agency to be protective for humans (including sensitive groups) over a lifetime; however, SLs are not always applicable to a particular site and do not address non-human health endpoints, such as ecological impacts. The SLs contained in the SL table are generic; they are calculated without site-specific information. They may be re-calculated using site-specific data.
>
> https://www.epa.gov/risk/regional-screening-levels-frequent-questions#FQ1

EPA describes residential soil as follows:

> This receptor spends most, if not all, of the day at home. The activities for this receptor involve typical home making chores (cooking, cleaning and laundering) as well as outdoor activities. The resident is assumed to be exposed to contaminants via the following pathways: incidental ingestion of soil, dermal contact with soil, inhalation of volatiles and fugitive dust. Adults and children exhibit different ingestion rates for soil. For example, the child resident is assumed to ingest 200 mg per day while the adult ingests 100 mg per day. To account for changes in intake as the receptor ages, age adjusted intake equations were developed.
>
> Note that the soil ingestion rates are intended to also represent ingestion of indoor dust. According to U.S. EPA 2011, 'The source of the soil in these recommendations could be outdoor soil, indoor containerized soil used to support growth of indoor plants, or a combination of both outdoor soil and containerized indoor soil. The inhalation and subsequent swallowing of soil particles is accounted for in these recommended values, therefore, this pathway does not need to be considered separately.' Further, according to U.S. EPA 1997, 'Although the recommendations presented below are derived from studies which were mostly conducted in the summer, exposure during the winter months when the ground is frozen, or snow covered should not be considered as zero. Exposure during these months, although lower than in the summer months, would not be zero because some portion of the house dust comes from outdoor soil.'
>
> https://www.epa.gov/risk/regional-screening-levels-rsls-users-guide

RISK

The risk column lists either cancer risk or non-cancer risk. The values for cancer risk represent a probability that one in a million people (1E-06) will get cancer from a lifetime of exposure to soil at the stated value.

A hazard quotient, or THQ, is the ratio of the potential exposure to a substance and the level at which no adverse effects are expected. If the Hazard Quotient is calculated to be less than 1,

then no adverse health effects are expected as a result of exposure. The risk to a human receptor from being exposed to a chemical via a single pathway.

THI is the sum of hazard quotients for substances that affect the same target organ or organ system. Because different pollutants may cause similar adverse health effects, it is often appropriate to combine hazard quotients associated with different substances. EPA has drafted revisions to the national guidelines on mixtures that support combining the effects of different substances in specific and limited ways. Ideally, hazard quotients should be combined for pollutants that cause adverse effects by the same toxic mechanism. However, because detailed information on toxic mechanisms was not available for most of the substances in this assessment, EPA aggregated only the effects of different respiratory irritants. The HI for respiratory irritation is only an approximation of the aggregate effect on the respiratory system (i.e., lungs and air passages) because it is possible that some of the substances cause irritation by different (i.e., non-additive) mechanisms.

As with the hazard quotient, aggregate exposures below a HI of 1.0 will likely not result in adverse noncancer health effects over a lifetime of exposure. However, an HI greater than 1.0 does not necessarily suggest a likelihood of adverse effects. Furthermore, the HI cannot be translated into a probability that adverse effects will occur and is not likely to be proportional to risk. A respiratory HI greater than 1.0 can be best described as indicating that a potential may exist for adverse irritation to the respiratory system.

https://archive.epa.gov/epawaste/hazard/tsd/td/web/pdf/05hhrap7.pdf

VECTOR

Generally, a vector would be an exposure pathway, for example, inhalation. In the EPA screening level tables, ten vector categories are used: Carcinogenic, Child Non-Carcinogenic, Dermal, Drinking, Ingestion, Inhalation, MCL, MCL-based, Non-Carcinogenic, and Risk-based. Some categories are pathways, for example, dermal, and drinking. Other categories combine pathways, for example, carcinogenic and child non-carcinogenic.

MAXIMUM CONCENTRATION

The Maximum Concentration is the maximum concentration found in a soil sample, either an investigation sample or verification sample.

QUALIFIER

Data qualifiers or flags identify potential data quality limitations or problems. The only data qualifier applied to the data in TABLE 1 is "E", which was defined as," Concentration exceeds the calibration range of the GC MS." Other qualifiers applied to some of the source data were J, which was defined as, "Indicates an estimated value", and B, which was defined as, "Analyte detected in method blank." Neither a "J" or B" qualifier was attached to the results listed in TABLE 1.

SAMPLE ID

The Sample ID is the identifier for the soil sample associated with the maximum reported concentration.

RATIO

Ratio is the Maximum Concentration divided by the Screening Level. A ratio greater than 1 means the Maximum Concentration is greater than the EPA Screening Level Value. In TABLE 1, the greatest ratio was 468.8 for Benzo [a]pyrene for the carcinogenic vector in Sample RDS-10. Exposure to this concentration of Benzo [a]pyrene is about 470 times the concentration that EPA calculates would cause one in a million cancers over a lifetime.