Health Consultation

Vapor Intrusion Potential at Properties Adjacent to
Former Risdon Corporation Facility

FORMER RISDON CORPORATION FACILITY
(a/k/a RISDON CORPORATION)

DANBURY, FAIRFIELD COUNTY, CONNECTICUT

EPA FACILITY ID: CTD001168558

JUNE 12, 2002

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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Prepared by:

Connecticut Department of Public Health
Under a Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

The conclusions and recommendations in this health consultation are based on the data and information made available to the Connecticut Department of Public Health and the Agency for Toxic Substances and Disease Registry. The Connecticut Department of Public Health and the Agency for Toxic Substances and Disease Registry will review additional information when received. The review of additional data could change the conclusions and recommendations listed in this document.

BACKGROUND AND STATEMENT OF ISSUE

The Connecticut Department of Public Health (CT DPH) was asked by the U.S. Environmental Protection Agency (EPA) to evaluate the public health implications of volatile organic compounds (VOCs) off gassing from contaminated groundwater near the Risdon Corporation and migrating into buildings in a residential/commercial neighborhood of Danbury, Connecticut. The data evaluated by CT DPH is from a groundwater and soil gas study conducted by Woodward & Curran, a contractor for the Risdon Company. The study involved five properties (2 with residences and 3 with commercial buildings) in a Danbury neighborhood. The five properties are located near the intersections of Old Newtown Road, Broad Street , and Augusta Drive, and immediately northwest of the former Risdon Corporation facility. One residence is on Broad Street , and the other is on Old Newtown Road, while the three commercial buildings are located on Old Newtown Road, and Augusta Drive The residential properties are located between the Risdon facility and a small river. A map of the area, with sample locations shown, is included as Attachment A. There are no private drinking water wells on the Risdon site or at any of the nearby downgradient properties.

The five sites were chosen for study because they are hydraulically down-gradient from the Risdon facility. Soil gas and groundwater sampling were conducted on these properties in December of 2001. Groundwater data is also available from nearby monitoring wells on the Risdon property. Groundwater below the Risdon site has been monitored for organic contaminants since the early 1980's. This "older groundwater data" is useful for constructing an upper-end (i.e., "worst case") scenario for exposure to solvents originating at the Risdon site. Nearby monitoring wells and representative sample dates were chosen with this purpose in mind.

Risdon began operations on Old Newtown Road in 1956. The company's manufacturing process included electroplating (nickel, brass, chrome, silver, cyanide); stripping (nitric acid, methylene chloride, formic acid); painting (lacquers, enamels); buffing and polishing. Wastes generated at the site include 1,1,1-trichloroethane (TCA) and trichloroethylene (TCE), lacquers, thinners, enamels, petroleum distillates, methylene chloride, formic acid , degreasing filters, silver cyanide solution, nitric acid, and metal hydroxide sludge. The chlorinated solvents, TCA and TCE have contaminated groundwater at and near the Risdon facility. TCE and TCA breakdown products, 1,2-dichloroethene (1,2-DCE), 1,1-dichlorethene (1,1-DCE) & vinyl chloride, have also been found in groundwater.

Description of adjacent properties

The residential properties both contain a house and a detached garage. On Broad Street , the single-family residence (built 1895) is one and one-half stories tall, and contains approximately 1200 square feet of floor space. On Old Newtown Road, the two-family residence (built about 1783) is two stories tall, and contains approximately 2100 square feet of floor space. Both residences are built on stone foundations and the basements are unfinished. Both garages are single-story. Although an exact count was not available, the two residences appear to be able to house between eight and twelve individuals.

The three commercial buildings are built on concrete slabs at grade. One building on Old Newtown Road contains a 20,000 square-foot two-story steel framed building built in 1989. Another, 95,000 square-foot, single-story, building was built in 1956. The property on Augusta Dr. contains a single story building. Metal plating operations have been conducted at this site since the building was constructed in 1963. Because these commercial buildings were built on a concrete slab, the potential for vapor intrusion is low. CT DPH is therefore less concerned about the potential for vapor intrusion at these addresses. Therefore, this Consultation does not include estimates of indoor air concentrations for the adjacent commercial properties.

DISCUSSION

Assessment methodology and results

At each sampling location, a soil gas probe[1] was inserted into the ground to a maximum depth of six feet. Soil gas samples were collected outside the building, as close to the foundation as possible. Initially, soil gas samples were analyzed onsite using a field gas chromatograph (GC). A soil gas sample was then collected using a SUMMA canister and was analyzed in the laboratory using a gas chromatograph mass spectrometer (GC/MS). Groundwater was sampled at or near the adjacent properties from monitoring wells screened at or below the water table (MW prefix) or from Geoprobe samples (GW prefix).

[1] Soil gas is a term describing gas that fills the tiny voids between soil particles. Usually, the voids between soil particles are filled with water. However, when groundwater is contaminated with volatile organic chemicals, the chemicals can separate into the gas phase and move into the soil particle voids. High levels of contaminants in soil gas can enter confined building spaces such as basements through crawl spaces, plumbing holes, other floor holes such as sumps and foundation cracks and can contaminate indoor air.

The following target analytes with the greatest potential to volatilize from groundwater into indoor air, were identified in groundwater or soil gas:

1. 1,1-Dichloroethene
2. Vinyl Chloride
3. Trichloroethene
4. Benzene
5. 1,1,1-Trichloroethane
6. Toluene
7. Freon 12
8. Freon 113
9. Chloroform
10. 1,1,1,1-Tetrachloroethane
11. Xylene
12. MTBE
13. cis- 1,2-Dichloroethene
14. 1,1-Dichloroethane
15. Methylene Chloride
16. Ethylbenzene
17. 4-Ethyltoluene
18. Trimethylbenzene

CT DPH uses comparison values to evaluate the public health implications of environmental contamination. The chronic comparison values are taken from the Connecticut Department of Environmental Protection's (CT DEP) Remediation Standards for residential exposure (RSR). These standards are accepted as indicators of a level of exposure considered safe for thirty years of nearly continuous exposure (See Tables 1 & 2; Chronic Comparison Value). Intermediate duration comparison values are also included in Tables 1 & 2. These values are greater than the chronic comparison values because they are derived from ATSDR's intermediate duration (15-365 days) comparison values. If estimated indoor air concentrations are below the comparison values, then there is little cause for concern. On the other hand, if indoor air concentrations exceed the comparison values, then further analysis is needed.

Tables 1 & 2 show the comparison values and summarize the sampling results for soil gas and groundwater taken at or near the residences. Maximum concentrations are included along with an estimate of the indoor air concentration. Maximum, rather than average, concentrations are often used in Health Consultations because they delineate the upper-end or "worst case" exposure scenario. The maximum indoor air concentration was estimated from soil gas data by multiplying the maximum soil gas concentration by 0.01 (the attenuation factor). An estimate done in this manner is expected to error on the high-side, indicating that the actual concentration is not likely to be greater than that shown (EPA, 2001). Estimates of maximum indoor air concentration are compared to a health-based benchmark. In this instance, the benchmark is the "target air concentration" taken from CT DEP's RSRs. Groundwater data was compared to CT DEP's residential groundwater volatilization criteria (GWVC), listed in the RSRs. GWVCs are conservative estimates derived from the target air concentrations. The Health-protective comparison values and the number of samples above this concentration are also shown. Contaminants detected below comparison values are not included in Tables 1 & 2.

In some instances, the detection limit of the assay (i.e., the lowest detectable concentration) was greater than the comparison value. This is indicated in Tables 1 & 2 by a range (e.g., Table 1, Part A, for 1,1-DCE). A range indicates that, for some samples, the detection limit of the assay was greater than the comparison value multiplied by the attenuation factor (for soil gas data). When this occurs, it is not possible to use the sample to determine if the estimate of indoor air

concentration is below the comparison value. For the example in Table 1, (a range of 1-6) there was one sample in excess of, and five samples with detection limits greater than the equivalent of the comparison value. It is therefore possible that the comparison value-equivalent concentration was exceeded in six out of seven samples. The analogous is true for sample results from groundwater data.

The data summarized in this Health Consultation suggests that concentrations of trichloroethene and 1,1-dichlorethene may be found in excess of health-protective comparison values at the two nearby residences with basements. It is also possible, based on limited evidence of groundwater contamination, that vinyl chloride is intruding the indoor air space. Past data would indicate that the vapor intrusion pathway was significant for at least ten years, but the duration of exposure could extend back 45 years, to when the Risdon facility was opened. The fact that both of these homes have stone foundations indicates that the rate of intrusion could be relatively high.

Broad Street , residential
Analysis of groundwater and soil gas data from sample sites in the vicinity of the Broad Street residence indicates that indoor air concentrations could exceed comparison values. Of the VOC's tested, TCE and 1,1-DCE were sometimes found at levels high enough to suggest that a vapor intrusion exposure pathway may be significant. Though benzene was reported in two soil gas samples, there is no evidence from nearby wells to indicate that it is a groundwater contaminant. Though vinyl chloride was below detection limits in the five soil gas samples tested, the detection limits for these were greater than the comparison value equivalent concentration (data not shown). A comparison of recent and older groundwater data indicates that the vapor intrusion pathway may have been present for at least ten years. Quantitatively, the older data suggests that air concentrations would have been higher in the past. A qualitative comparison indicates that 1,1,1-trichloroethane exposures may have decreased to levels below the comparison value. Results for soil gas, recent groundwater, and older groundwater testing are shown in Table 1; parts A, B, and C, respectively.

Old Newtown Road, residential
Analysis of groundwater and soil gas data from sample sites in the vicinity of the Old Newtown Road residence indicates that indoor air concentrations could exceed comparison values. Of VOC's tested, TCE and 1,1-DCE were sometimes found at levels high enough to suggest that a vapor intrusion exposure pathway may be significant. Though vinyl chloride was below detection limits in four of five groundwater samples tested, the detection limits were greater than the comparison value equivalent concentration in these four samples. A comparison of recent and older groundwater data indicates that the vapor intrusion pathway may have been present for at least ten years. Quantitatively, the older data suggests that air concentrations would have been higher in the past. Results for soil gas, recent groundwater, and older groundwater testing are shown in Table 2; parts A, B, and C, respectively.

Table 1: Data and comparison values in the vicinity of the Broad Street residence.

Part A: Soil gas data.

Contaminant	Maximum Soil Gas (ppbv)	Predicted Upper Bound Indoors (ppbv)[1]	Samples Above Chronic Comparison Value (#)[2]	Samples Analyzed (#)	Chronic Comparison Value (ppbv in air)[5]	Intermediate Duration Comparison Value (ppbv in air)[6]
trichloroethene	140	1.40	1	8	0.915	100
1,1-dichloroethene	5.8	0.06	1-6	7	0.012	20

Part B: Recent groundwater data

Contaminant	Groundwater Maximum on/near Residence (ppb)[3]	Samples Above Chronic Comparison Value (#)[2]	Samples Analyzed (#)	Chronic Comparison Value (ppb in water)[5]	Intermediate Duration Comparison Value (ppb in water)[6]
trichloroethene	1900	2	6	219	24000
1,1-dichloroethene	370	4	6	1.1	2328

Part C: Older groundwater data.

Contaminant	Groundwater Maximum on/near Residence (ppb)[4]	Samples Above Chronic Comparison Value (#)[2]	Samples Analyzed (#)	Chronic Comparison Value (ppb in water)[5]	Intermediate Duration Comparison Value (ppb in water)[6]
1,1,1-trichloroethane	53000	3	4	20392	75920
trichloroethene	4500	3	4	219	24000
1,1-dichloroethene	4300	4	4	1.1	2328

[1]An attenuation factor of .01 is considered a reasonable upper bound for indoor air/soil gas concentration ratio (EPA, 2001)

[2] A sample is counted in this column if the estimated concentration is greater than the comparison value. A range indicates that some samples had detection limits below the comparison value. The high number in the range is derived from including the detection limit in the analysis (see text).

[3]Nearby wells include MW11, MW5, MW10, & MW11 (Risdon); 3/2001 & 9/2001 data

[4]Near site wells include MW11, MW5, MW10, & MW11 (Risdon); 11/4/88 & 10/29/90 data

[5]Chronic comparison values are the CT RSR's (residential Target Indoor Air Concentrations, or the residential Groundwater Volatilization Criteria).

[6]Intermediate duration comparison values are from ATSDR's list of air comparison values. The water-equivalent concentration (Groundwater Volatilization Criteria)was calculated from the intermediate duration air comparison value by the method outlined in the CT RSRs.

Table 2: Data and comparison values in the vicinity of the Old Newtown Road residence.

Part A: Soil gas data

Contaminant	Maximum soil gas (ppbv)	Predicted Upper Bound Indoors (ppbv)[1]	Samples above Chronic Comparison value (#)[2]	Samples Analyzed (#)	Chronic Comparison Value (ppbv in air)[5]	Intermediate Duration Comparison Value (ppbv in air)[6]
trichloroethene	280	2.8	2	5	0.915	100
1,1-dichloroethene	86	0.86	4-5	5	0.012	20

Part B: Recent groundwater data.

Contaminant	Groundwater Maximum on/near Residence (ppb)[3]	Samples Above Chronic Comparison Value[2]	Samples Analyzed (#)	Chronic Comparison Value (ppb in water)[5]	Intermediate Duration Comparison Value (ppb in water)[6]
trichloroethene	2700	6	8	219	24000
1,1-dichloroethene	98	6-7	8	1.1	2328
Vinyl Chloride	5	1-5	5	2	1287

Part C: Older groundwater data

Contaminant	Groundwater Maximum on/near Residence (ppb)[4]	Samples Above Chronic Comparison Value (#)[2]	Samples Analyzed (#)	Chronic Comparison Value (ppb in water)[5]	Intermediate Duration Comparison Value (ppb in water)[6]
trichloroethene	12000	2	4	219	24000
1,1-dichloroethene	248	2-3	4	1.1	2328
vinyl chloride	83	1-4	4	2	1287

[1]An attenuation factor of .01 is considered a reasonable upper bound for indoor air/soil gas concentration ratio (EPA, 2001)

[2] A sample is counted in this column if the estimated concentration is greater than the comparison value. A range indicates that some samples had detection limits below the comparison value. The high number in the range is derived from including the detection limit in the analysis (see text).

[3]Nearby wells include MW14,& MW15 (Risdon); 3/2001 & 9/2001 data

[4]Near site wells include MW14,& MW15 (Risdon); 4/14/92, 8/31/92, & 7/13/92 data

[5]Chronic comparison values are the CT RSR's (residential Target Air Concentrations, or residential Groundwater Volatilization Criteria).

[6]Intermediate duration comparison values are from ATSDR's list of air comparison values. The water-equivalent concentration (Groundwater Volatilization Criteria)was calculated from the intermediate duration air comparison value by the method outlined in the CT RSRs.

Exposure pathways

As both residential addresses are served by public water, there is no potential for TCE or 1,1-DCE exposure from drinking or other domestic water uses. The primary exposure pathway therefore is soil gas. Though exposure via direct volatilization can not be ruled out, it is apparent that flooding of basements with groundwater is only a seasonal occurrence. Groundwater level measurements conducted in September 2001 indicate that groundwater was found about nine feet below grade in the vicinity of the Old Newtown Road residence, and about 13 feet below grade in the vicinity of the Broad Street residence. Estimating that the basements at these two sites are excavated to six feet below grade, groundwater intrusion potential seems low at the Broad Street residence, but flooding may occur seasonally at the Old Newtown Road residence Even so, when averaged over the year, the soil gas pathway should be the primary exposure pathway.

Groundwater at the Risdon facility has been sampled at numerous times and locations in the past. (CT DPH has copies of groundwater data back to 1983.) In order to estimate exposure (duration and concentration), CT DPH examined the database for the groundwater monitoring wells near the adjacent properties (e.g., MW2, MW5, MW10, MW11, MW14, MW 15). From this data set, CT DPH selected sample dates that were older, and wells that were more contaminated, than the average (see Tables 1 & 2). This approach results in an upper-end estimate of exposure, which is needed for constructing a "worst case" type of exposure scenario.

Public Health Implications of present and past exposures

Analysis of recent groundwater and soil gas data from sample sites in the vicinity of the two residences indicates that indoor air concentrations could exceed comparison values. Of VOC's tested, TCE, 1,1-DCE, and vinyl chloride were sometimes found at levels high enough to suggest that a vapor intrusion exposure pathway may be significant. Though benzene was found above its comparison value in one of three soil gas samples, there is no evidence from nearby wells to indicate that it is a groundwater contaminant. This suggests that benzene is from sources other than groundwater. Though vinyl chloride was below detection limits in most samples tested, the detection limits were less than the comparison value.

A comparison of recent and older groundwater data indicates that the vapor intrusion pathway may have been present for at least ten years. An upper limit to exposure duration would be 45 years (i.e., from the year operations began at the Risdon facility). As groundwater data was not available from beyond approximately ten years ago, it is not possible to determine exposure duration with greater precision. The older groundwater data suggests that indoor air concentrations may have been greater in the past, and that 1,1,1-trichloroethane and vinyl chloride may have been present in indoor air at concentrations above the comparison values.

From results in Tables 1 & 2, it is apparent that 1,1-DCE is the primary driver of risk. 1,1-DCE has been shown to induce tumors in laboratory mice after long-term inhalation exposure. In 1998, the US Environmental Protection Agency (EPA) used the results of the mouse study as the basis to list 1,1-DCE as a possible human carcinogen. However, EPA is now re-reviewing this classification, and the status of 1,1-DCE's listing is likely to change in the near future. Draft review documents from EPA indicate that, EPA's Integrated Risk Information System (IRIS) will no longer support the basis for quantifying cancer risk from 1,1-DCE exposure [2]. CT DPH has thus decided not to do a quantitative risk assessment of 1,1-DCE exposure at this time.

Site visit & community concerns

On February 21, 2002, representatives from CT DPH, ATSDR, EPA, Woodward & Curran (Risdon's Contractor), and the Danbury Health Department visited the area adjacent to the Risdon facility. Purposes of this visit were to inform public health officials of the goals of this Health Consultation, and to discuss any relevant community concerns. During the visit, one owner of an adjacent property approached the group to ask for an explanation of the group's purpose. During our exchange, this individual did not ask about the possible health effects of vapor intrusion. CT DPH and the local health department are not aware of any specific community concerns at this time. In the future, CT DPH will contact the families living at the adjacent properties (See Public Health Action Plan).

CONCLUSIONS

Based on the limited data at or near the two residential properties, DPH has estimated that indoor air concentrations could exceed chronic comparison values for 1,1-DCE, TCE, and vinyl chloride. This conclusion does not mean that adverse health effects can be expected because the concentration estimates are based on upper-bound estimates of exposure, and the chronic comparison values incorporate conservative estimates of risk. Actual indoor air data, and better estimates of exposure duration, would likely result in a lower estimate of present-day exposure.

ATSDR has a categorization scheme whereby the level of public health hazard at a site is assigned to one of five conclusion categories (Attachment C). Because actual indoor air data does not exist, DPH has concluded that the present public health hazard at the Broad Street and Old Newtown Road residences is indeterminate in nature. Because data for evaluating past exposures at these two residences is also insufficient, the risk from past exposure is also indeterminate. At present, there is no evidence suggesting that the vapor intrusion potential at the other (i.e., commercial) addresses is significant. Further consideration will be given to sampling the

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[2] The conventional basis for calculating cancer risk is the "slope factor". EPA derived this number from results of a single study in mice (See Maltoni et al. (1985) Arch Res Ind Carcinogenesis Vol 3), and supported it in a 1998 review currently available from IRIS. However, it is apparent that EPA intends to remove this benchmark from its IRIS database because they no longer believe that risk calculations based on the 1,1-DCE slope factor can be justified in light of negative results from other studies. EPA's new assessment is now in draft form and is available on the web at http://www.epa.gov/superfund/programs/risk/iris.pdf

commercial addresses if subsequent sampling of residential indoor air indicates that a public health hazard is present.

RECOMMENDATIONS

CT DPH recommends testing the indoor air at the two residences because the potential for vapor intrusion is high. In contrast, the potential for vapor intrusion is much less at the other three addresses. Therefore, unless there is evidence of structural defects (i.e., significant cracking of the slab), indoor air testing is not recommended for the structures built on a concrete slab at the present time.

PUBLIC HEALTH ACTION PLAN

Actions Planned

1. CT DPH will provide input to EPA on development of a sampling plan to further characterize the nature and extent of indoor air impacts in the homes of interest.

2. If EPA takes exposure reduction measures in any of the homes, CT DPH will work with EPA, CT DEP and the Danbury Health Department to evaluate alternatives and respond to public health questions and concerns.

3. CT DPH will continue to work with EPA, CT DEP and the Danbury Health Department to prepare a letter to the residents of 2 Broad Street and 2 Old Newtown Road which will: (1) summarize the results of the EPA Soil Gas and Indoor Air Study; (2) provide a public health interpretation of the results; and, (3) discuss next steps.

4. CT DPH will work with the Danbury Health Department in responding to public health concerns and questions.

REFERENCES

ATSDR 1994. Toxicological Profile for 1,1-DCE, U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, May 1994.

EPA (2001). Supplemental guidance for evaluating the vapor intrusion to indoor air pathway EPA draft document p. 9: 10/23/2001

EPA 1998. Environmental Protection Agency Integrated Risk Information System, 1,1-DCE Carcinogenicity Assessment, February 1, 1998.

CERTIFICATION

The Health Consultation for Indoor Air Evaluation in Danbury Connecticut was prepared by the Connecticut Department of Public Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was initiated.

Technical Project Officer, SPS,SSAB,DHAC

The Division of Health Assessment and Consultation (DHAC), ATSDR, has reviewed this Health Consultation and concurs with its findings.

Chief, SPS, SSAB,DHAC,ATSDR

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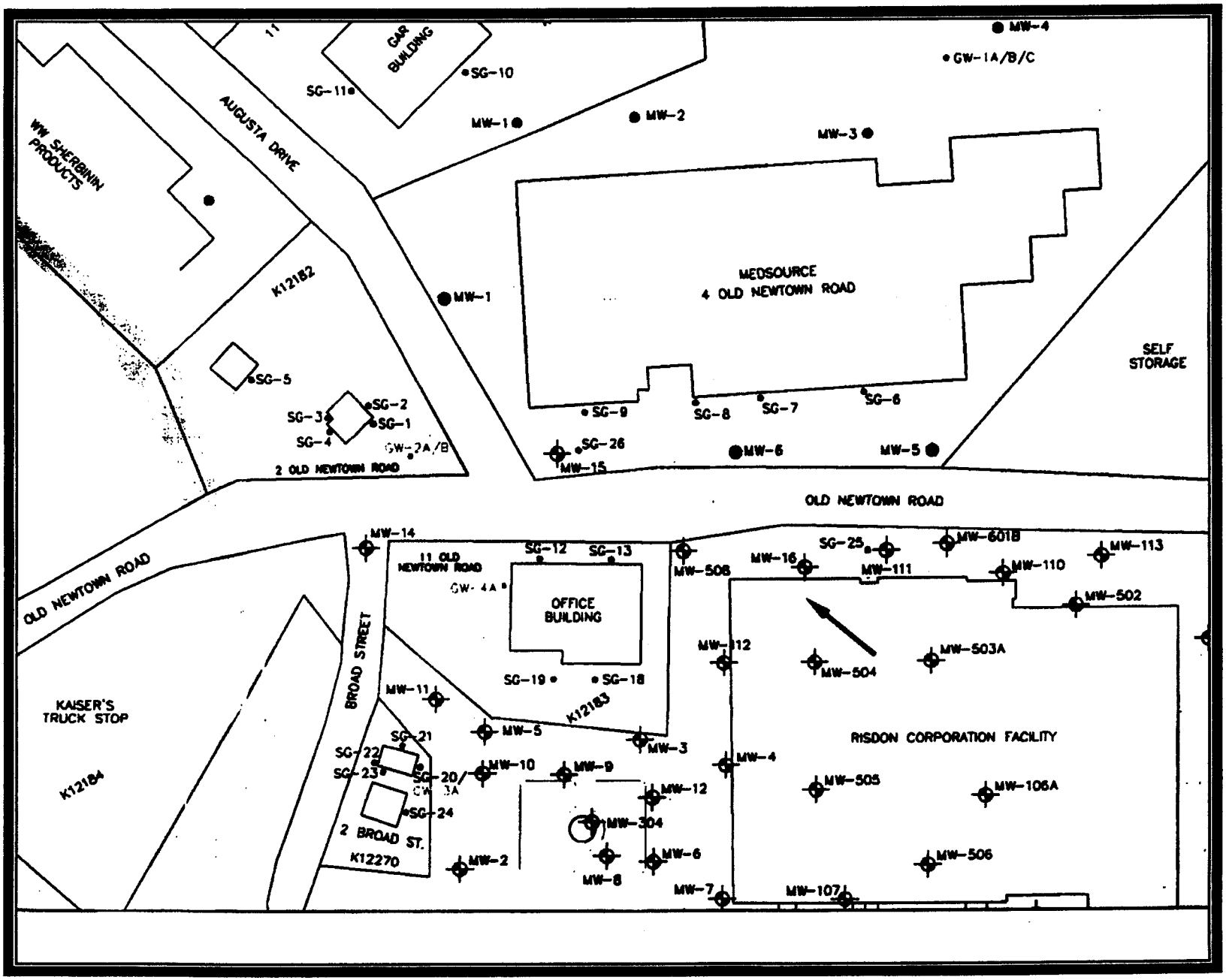
Attachment A: Diagram of the Risdon Facility with adjacent properties

MW: Location of monitoring well SG: Soil gas location



Attachment B: ATSDR Public Health Hazard Categories

Category	Definition	Criteria
A. Urgent public health hazard	This category is used for sites that pose an urgent public health hazard as the result of short-term exposures to hazardous substances.	evidence exists that exposures have occurred, are occurring, or are likely to occur in the future AND estimated exposures are to a substance(s) at concentrations in the environment that, upon short-term exposures, can cause adverse health effects to any segment of the receptor population AND/OR community-specific health outcome data indicate that the site has had an adverse impact on human health that requires rapid intervention AND/OR physical hazards at the site pose an imminent risk of physical injury
B. Public health hazard	This category is used for sites that pose a public health hazard as the result of long-term exposures to hazardous substances.	evidence exists that exposures have occurred, are occurring, or are likely to occur in the future AND estimated exposures are to a substance(s) at concentrations in the environment that, upon long-term exposures, can cause adverse health effects to any segment of the receptor population AND/OR community-specific health outcome data indicate that the site has had an adverse impact on human health that requires intervention
C. Indeterminate public health hazard	This category is used for sites with incomplete information.	limited available data do not indicate that humans are being or have been exposed to levels of contamination that would be expected to cause adverse health effects; data or information are not available for all environmental media to which humans may be exposed AND there are insufficient or no community-specific health outcome data to indicate that the site has had an adverse impact on human health
D. No apparent public health hazard	This category is used for sites where human exposure to contaminated media is occurring or has occurred in the past, but the exposure is below a level of health hazard.	exposures do not exceed an ATSDR chronic MRL or other comparable value AND data are available for all environmental media to which humans are being exposed AND there are no community-specific health outcome data to indicate that the site has had an adverse impact on human health
E. No public health hazard	This category is used for sites that do not pose a public health hazard.	no evidence of current or past human exposure to contaminated media AND future exposures to contaminated media are not likely to occur AND there are no community-specific health outcome data to indicate that the site has had an adverse impact on human health