

# Questions & Answers from the View-Master Public Meeting Held on January 28, 2003



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This document contains responses to questions that were gathered at the public meeting that Oregon DHS held with former View-Master workers and concerned citizens on January 28, 2003, at the Elmonica School in Beaverton.

To develop answers, these questions were referred to several different agencies, including the Office of Environmental and Occupational Epidemiology of Oregon DHS, the Office of Environmental Services and Consultation of Oregon DHS, Oregon Department of Environmental Quality, Oregon Drinking Water Program, the federal Agency for Toxic Substances and Disease Registry, the Ombudsman's Office for Injured Workers in the Department of Consumer and Business Services, as well as the Mattel Corporation.

The responses were developed to the best of our knowledge at the present time. This document may be updated in the future if we receive new information.

The questions have been grouped into sections according to topic. Please refer to the Table of Contents below to find questions on specific topics.

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## Section I. Effects of TCE on Health

### ***QUESTIONS ABOUT REPRODUCTIVE AND DEVELOPMENTAL EFFECTS***

There is some evidence that exposure to trichloroethylene (TCE) in drinking water may cause certain types of birth defects. However, this body of research is still far from conclusive and there is insufficient evidence to determine whether or not there is an association between exposure to TCE and developmental effects. Some studies suggest that more birth defects may occur when mothers drink water containing TCE. In a study of TCE exposure from well water, greater than expected numbers of children were reported to be born with heart defects. Data from some animal studies also show developmental effects of TCE on the heart. However, other chemicals were also in the water from this well and may have contributed to these effects. Thus, it is not possible to make firm conclusions about the exact effects of TCE from these studies, and more studies need to be done. The proposed health study will evaluate these conditions among the population of former View-Master employees and their children.

***Q: All of my children have birth defects - could they have been caused by TCE?***

It is impossible to determine with certainty whether any individual birth defects were caused by TCE exposure. As noted above, the most common birth defects related to TCE exposure include cardiac anomalies in children who were exposed to TCE in the fetal stage. Effects on nervous system development and cleft palate formation have also been noted among the children of mothers who drank water contaminated with TCE during pregnancy. One study reported a higher number of children with a rare defect in the respiratory system and eye defects. Children listed in the National Exposure Subregistry of persons exposed to TCE were reported to have higher rates of hearing and speech impairment. There are many questions regarding these reports.

***Q: Are my daughters' endometriosis, chronic fatigue syndrome, and Irritable Bowel Syndrome caused by TCE?***

No literature was found to suggest that the conditions mentioned above are related to TCE exposure.

***Q: How do I know if my grandchildren have been or may be affected? (birth defects, cancer, etc.)? How can we find out about 2nd generation health concerns?***

No effects from TCE would be likely to occur in grandchildren as a result of TCE exposure experienced by their grandparents. TCE does not accumulate in the body to appreciable levels. In addition, TCE does not induce genetic changes in most laboratory tests, thus making its potential to effect the second generation even more unlikely.

***Q: I was pregnant with two of my children while employed at Sawyers. One of these daughters has a problem with seizures, could this be related?***

TCE can induce neurological effects, but no studies were found that associated TCE exposure during pregnancy to seizures in children.

***Q: My son was born through c-section and suffered from seizures while I was an employee at Hall Street. He now is unable to have children due to a low sperm count. Does this have to do with TCE?***

There is no way to determine for certain whether TCE exposure has resulted in an individual's seizures and low sperm count. Some studies have associated low sperm counts and abnormal sperm production to TCE as a result of workplace exposure in adults.

***Q: What is known about reproductive health outcomes? Does TCE affect female fertility? My mother had reproductive difficulties and lost pregnancies. Is this related?***

Studies on female reproductive effects are few. One study did report increased menstrual disorders in female workers exposed to TCE.

***Q: Could TCE stay in your system and possibly cause birth defects at a later time?***

This scenario is highly unlikely, as TCE does not accumulate in the body to levels that would represent a health concern.

***Q: My mother was a worker at the Hall St. plant while she was pregnant with me. I have a multitude of nervous system problems that the doctors cannot treat. Was this TCE related?***

Exposure to TCE during embryonic development may result in abnormal development of the neural tube. Unfortunately, there is no way to know how much TCE exposure occurred during critical stages of neural tube development at the Hall Street Plant. Studies on rats have demonstrated changes in brain metabolism and adult behavior as a result of embryonic exposure to TCE.

## ***QUESTIONS ABOUT CANCER***

The link between oral exposure to TCE and the incidence of cancer in humans is controversial. We do not have any clear evidence that TCE alone in drinking water can cause leukemia or any other type of cancer in humans. People who used water for several years from two wells that had high levels of TCE may have had a higher incidence of childhood leukemia than other people, but these findings are not conclusive, partly because TCE was not the only contaminant present in the drinking water. The most consistent effect across epidemiological studies is an association between TCE exposure and kidney cancer (many of these studies were based on inhalation of TCE as opposed to drinking water exposure).

As part of the National Exposure Subregistry, the Agency for Toxic Substances and Disease Registry (ATSDR) compiled data on 4,280 residents of three states (Michigan, Illinois, and

Indiana) who had environmental exposure to TCE. It found no definitive evidence of an excess of cancers from TCE exposure.

A study in New Jersey found an association between leukemia in women and exposure to TCE in the drinking water. A study in Massachusetts found that TCE exposure was associated with leukemia in children. Results from other studies are inconsistent, and the links between TCE and specific cancers are not fully understood. More studies need to be done to establish the relationship between exposure to TCE and cancer.

Based on the limited data in humans regarding TCE exposure and cancer, and evidence that high doses of TCE can cause cancer in animals, the International Agency for Research on Cancer (IARC) has determined that TCE is probably carcinogenic to humans. In addition, the EPA considers TCE to be a probable human carcinogen. The proposed human health evaluation of former View-Master workers may add important information to help answer these questions about links between exposures and disease.

***Q: I am under doctor's care for bladder cancer, is this related?***

It is impossible to say for sure whether or not TCE is related to an individual case of cancer or not. In one study, elevated rates of bladder cancer were noted in workers exposed to TCE through inhalation and drinking water. However, the results were not significant enough to conclude that TCE was the cause of the elevated number of bladder cancers. Other studies have not observed elevated bladder cancer after workplace exposure. In the proposed View-Master health study, we will look for any links between TCE exposure at the View-Master plant and the incidence of bladder cancer among former workers, as well as other health problems.

***Q: I have been stricken twice with cancer and it is expected to recur. Could TCE have contributed to my illnesses?***

Some types of cancer are more likely to be associated with TCE exposure compared to other forms based on existing studies. Unfortunately, it is not possible to determine for certain whether or not TCE contributed to an individual's illness. However, by looking at the health of the View-Master worker population as a whole, we can determine whether there are patterns of illness that would not normally occur. We will be examining various types of cancers and other illnesses in the proposed health study.

***Q: I know former workers who developed breast cancer. Any relation to TCE?***

No association was found in the literature to suggest a link between breast cancer and TCE exposure in the workplace.

***Q: I have lymphoma cancer. Was water & working in injection mold a factor? Is there a future health threat?***

Some studies have found a link between TCE and lymphomas. Although it is not possible to determine whether an individual case of lymphoma was directly caused by TCE, in the proposed

health study we hope to determine whether there is an excessive incidence of lymphoma among former View-Master workers.

***Q: How many years in the future does cancer show up?***

Most types of cancer take several years or decades to show up after exposure to a carcinogen. However, it is impossible to predict when cancer will show up or if it will develop at all in any given individual. For example, although smoking has been shown to cause lung cancer, not all smokers will develop lung cancer.

***Q: I had a hysterectomy due to cancer, is this related?***

One study found an elevated form of rare ovarian cancer in women exposed to TCE. Another study found a significant increase in cervical cancer as a result of workplace exposure to inhaled TCE.

It is not possible to determine whether any individual's illness was caused directly by TCE. By conducting a complete health study, we can instead determine whether patterns of particular diseases emerge among the population of former View-Master workers as a whole.

***Q: Is there any association with my brother's inoperable brain tumor and TCE?***

No information could be found on brain tumors and exposure to TCE.

***Q: My mother worked at the Hall Street Plant for 10 years. Last year she was diagnosed with kidney cancer. Is this related?***

One of the initial findings from the DHS Public Health Consultation was that elevated rates of kidney cancer were observed in a limited number of workers from the Hall Street plant. Epidemiological evidence and toxicological studies have demonstrated an association between TCE exposure and kidney cancer. Unfortunately, it is not possible to determine for certain whether an individual case of kidney cancer was related to workplace exposure to TCE.

***QUESTIONS ABOUT VARIOUS OTHER HEALTH EFFECTS***

***Q: What other health concerns other than cancer might be caused by TCE?***

TCE has been associated with numerous effects besides cancer. Several of these effects remain controversial, due to small numbers among worker populations and mixed exposures to other chemicals. Other effects are mostly associated with high dose, short-term exposure.

Non-cancer effects that may be associated with TCE exposure according to some studies include cardiovascular, respiratory, liver, kidney, immunological, neurological, reproductive and developmental effects. Other studies have found no association between TCE exposure and the effects mentioned above.

***Q: I have several medical problems for which doctors have no explanation. These include urinary, bladder and nerve problems, loss of hearing, muscle and joint problems. Could these be TCE related?***

It is impossible to say for certain whether or not these effects are related to TCE exposure. Hearing problems were noted in children exposed in utero to TCE. Impaired kidney function was noted in some studies as a result of exposure to a high concentration of TCE. No information was found on musculoskeletal effects and TCE exposure.

***Q: Can TCE cause Lupus (SLE), fibromyalgia, or Sjogrens syndrome? I have had numerous joint replacements, is this related?***

A study of residents from Tucson, Arizona, who were exposed to TCE and other chemicals in well water drawn from the Santa Cruz aquifer found increased frequencies of systemic lupus erythematosus symptoms. No information was found on the other conditions mentioned above.

***Q: Can TCE cause Crohn's disease?***

No information was found on Crohn's disease and exposure to TCE.

***Q: I have had intestinal problems after working 14 years at the plant, yet the screening doctors ignored them.***

Some of the people exposed to TCE and other chlorinated hydrocarbons in the drinking water in Woburn, Massachusetts, complained of chronic nausea, episodic diarrhea, and constipation. Although 52% of the subjects had these complaints, these general signs could not be specifically attributed to the TCE.

***Q: I drank many gallons of water. Can this have caused my migraines and sinus problems?***

Headaches were reported in a study population who drank well water contaminated with TCE. In addition, respiratory difficulties due to TCE exposure have been observed in another study. However, headaches and sinus problems are also related to numerous factors that have nothing to do with TCE exposure.

***Q: After 14 years at the Hall Street plant, I have some nasty allergies, asthma and thyroid problems, are these TCE related?***

One study did suggest increased respiratory disorders, such as asthma, bronchitis and pneumonia in children who were chronically exposed to contaminated well water.

***Q: I worked for about 12 years at the plant, in 1968 I developed tinnitus, which I have had constantly since, is this related?***

There were no studies that examined an association between tinnitus and TCE exposure.

***Q: Should I be worried about getting kidney & liver problems now if I worked at the plant from 1971-6?***

While it is unlikely that liver and kidney problems will develop, it is important to tell your physician about your employment at the Hall Street plant and to remain proactive about screening for potential health problems.

***Q: Does TCE affect the immune system? Can TCE cause multiple chemical sensitivities, food allergies, and environmental allergies by weakening your immune system?***

Immunological abnormalities were reported in 23 adults in Woburn, Massachusetts, who were exposed to well water contaminated with TCE and other chemicals, and who were family members of children with leukemia. These immunological abnormalities, tested for 5 years after well closure, included persistent changes in white blood cells. The ability to apply these findings to other communities may be limited, however.

***Q: Does TCE have anything to do with diabetes?***

Although there have been no studies on specific endocrine effects in humans following oral exposure to TCE, in the National Exposure Subregistry for TCE, diabetes rates were higher for females in certain age groups. In the proposed View-Master health study, DHS plans to examine whether diabetes occurs excessively among former View-Master workers, to help determine whether TCE exposure may increase the risk of diabetes.

***Q: Does TCE cause neurological effects? Could rapid heart rate be caused by TCE?***

The epidemiological studies of the people exposed to TCE, as well as other chemicals, from well water in Woburn, Massachusetts, did not reveal neurological problems. Some of the people in this community did show residual damage to the facial and trigeminal nerves, measured by a decreased blink reflex (indicating damage to cranial nerves V and VII) six years after exposure.

Among persons in the ATSDR Exposure Subregistry for TCE, a statistically significant increase in impairment of hearing was reported in children age 9 years or younger. The study authors caution that their findings do not identify a causal relationship between TCE and effects but does suggest areas for further research.

***Q: Is there testing to see if TCE is still in one's system?***

Yes, there are some tests that can show if you have been recently exposed to TCE since this chemical can be measured in your breath. Also, there are tests that can be ordered by a doctor to measure TCE or a number of breakdown products of TCE in your urine or blood from recent exposure.

If the measurements are done soon after the exposure, the breath levels can indicate whether you have been exposed to a large amount of TCE or only a small amount. Urine and blood tests can

also show if you have been recently exposed to large amounts of this chemical. Because one of the breakdown products leaves your body very slowly, it can be measured in the urine for up to about 1 week after TCE exposure. However, exposure to other similar chemicals can produce the same breakdown products in your urine and blood. Therefore, these methods cannot confirm whether you have been exposed specifically to TCE.

***Q: Can TCE affect you immediately? When does it usually have an impact?***

Immediate effects from TCE usually happen only when very large amounts of the undiluted solvent enter the body over a short period of time. Most of the health concerns from drinking TCE-contaminated water, which is less concentrated than pure TCE solvent, would only be seen months to years after the exposure began.

## Section II. Environmental Safety, Monitoring & Cleanup

***Q: I worked in the Cascade Plaza Office Building, 8625 SW Cascade Ave. We were built in View Master's parking lot. I worked there from 1987 to 2001. Was there shared water or chance of TCE exposure for workers in our building? If so, what are the health risks and exposure?***

Soil and shallow groundwater beneath the Cascade Plaza building were not affected by the contamination. Therefore, there is no exposure risk for building occupants from TCE beneath Cascade Plaza office building.

The Cascade Office Plaza's water supply is not from the View Master's supply well, but rather is provided by the City of Beaverton. The City of Beaverton's water supply comes from the Bull Run Reservoir located 40 miles east of Portland. The City's backup water supply wells do not draw water from groundwater beneath the plant site.

***Q: Why will it take 30 years to clean up groundwater at the site?***

Once groundwater gets contaminated, it is a difficult process to clean it up. TCE tends to remain in soil while a small amount of the chemical dissolves into groundwater. Even after large volumes of groundwater have been removed from the ground and cleaned, some TCE will still remain in soil and continue to contaminate the groundwater. Only after many years of groundwater removal and treatment will the TCE levels be reduced to an acceptable level. It is important to note, though, that exposure to groundwater is no longer occurring, so there is no current risk to people from groundwater. DEQ will require that groundwater use be restricted until the water is clean.

***Q: Is the soil contaminated in the Greenway Park along the bicycle path? Is it safe for pets to eat the grass? Is cancer really epidemic among dogs in the Beaverton area? What can I do to protect my dog as well as myself?***

Because there is no state cancer registry for animals, there is no way to determine whether cancer is excessive among dogs in Beaverton compared with elsewhere in Oregon. The maximum TCE concentration in Fanno Creek detected during surface water monitoring was 6 ug/L, which is only slightly above the drinking water standard. Most samples collected were below a detection limit of 0.5 ppb. We do not believe that pets have been exposed to levels of contamination from the site that could cause increases in cancer among pets.

All the former disposal areas are covered by buildings and paved parking. Very little soil contamination with TCE was found in the disposal areas as the TCE volatilized from the shallow zone soil over the last 20 years since disposal practices ceased. The groundwater beneath the park is not contaminated. TCE does not accumulate in grasses, and the grass would be safe to eat even if it was being fed by shallow groundwater contaminated with TCE.

No specific actions are necessary to protect pets or recreational users of the Greenway because Fanno Creek is not affected by TCE at levels that pose a health risk. The contaminated

groundwater is being controlled to prevent future impacts to the creek. The cleanup process includes groundwater and surface water monitoring to ensure the measures are protective to health.

***Q: If Fanno Creek was being tested weekly, why didn't it show up then?***

No monitoring was done on Fanno Creek prior to implementation of the Remedial Investigation (RI) for Parcel 3 in 1999. Fanno Creek and the adjacent wetlands were monitored during the RI for volatile organic compounds (VOCs) and cyanide. A focused risk assessment was conducted when TCE and vinyl chloride was found in surface water within the wetland to assess potential risk to children who might come in contact with the contaminated surface water in the wetland. The results of that assessment showed that there would not be an elevated risk.

In the fall of 2001, GAF conducted bi-weekly sampling of the wetland and Fanno Creek to determine whether the cyanide detected in the wetland was "free" cyanide, which is the basis for the ambient water quality criteria (Ferro cyanide, a iron-cyanide complex was used in film processing). The results of the more frequent monitoring were considered in DEQ's remedy selection process. The results indicated that free cyanide concentrations occasionally exceeded the ambient water quality criteria of 5.2 ug/L within the wetlands drainage ditch, but did not have an adverse impact on Fanno Creek.

***Q: Can TCE migrate from the contamination sites to public wells?***

The migration of contaminated groundwater has been under control since July 2000 through pumping of the groundwater for treatment. The treatment system located near Fanno Creek has no air emissions. The TCE is captured by activated carbon and is transported to a treatment facility located in Washington. Treated groundwater is discharged to the sanitary sewer. No public wells besides the plant's supply well have been contaminated by the site.

***Q: Is our City water tested accurately and frequently enough to guarantee safety?***

The City's municipal water supply is monitored for safety on a constant basis. Monitoring data is available on the Oregon Drinking Water Program's website, <http://www.ohd.hr.state.or.us/dwp/>, by clicking on Data Online, then click on Name Lookup and enter your city to find your water supplier. Water safety data is posted online on a live, continuous basis. Further inquiries may be directed to the Oregon Drinking Water Program, at (503) 731-4010.

***Q: Was Whitford Junior High school, which is directly across Hwy 217 from the site, affected? Could the contamination have gotten into the water at the school?***

DEQ did not identify any wells in the area used by Whitford Junior High School. Since there are no records of a public water supply well for the school, the school would have been served by the City of Beaverton public water supply which was/is unaffected by the groundwater contamination at the plant.

The groundwater contamination is limited to areas west of Highway 217 because the plant well's use prevented movement of contamination away from the plant site. The plant's supply well provided drinking water to plant workers only.

Wastes from the degreasing operations at the plant were dumped on the ground from 1951 to sometime in the 1970s. The dumping areas were located west of the railroad tracks and east of Fanno Creek. The solvents leached into the groundwater. TCE slowly dissolves into groundwater. The contaminated groundwater was drawn into the plant's supply well when it was pumped.

During the 1950s to the 1970s, there were undoubtedly some emissions of TCE to the atmosphere associated with the degreasing operations at the plant. We have no direct air monitoring data during this time frame, and therefore, cannot say with certainty that TCE was never present in ambient air near the school you attended. Air modeling was done during the investigation to assess TCE transport in the atmosphere. Generally, TCE would be predicted to disperse to trace levels prior to reaching Highway 217.

***Q: Will DHS and DEQ be using the new toxicity factors for TCE available from EPA?***

The EPA has released new guidelines for TCE called cancer slope factors. Cancer slope factors are theoretical risk boundaries that are used for determining site cleanup standards. The EPA's new guidelines call for more stringent goals in site cleanup. Oregon DEQ has incorporated EPA's new guidelines in the remediation goals for the View-Master site to ensure that the cleanup measures are as protective to human health as possible.

### Section III. Contaminants Other than TCE

***Q: Are there other contaminants (in the water) and health risks? What about the other chemicals, PCE & DCE?***

In addition to TCE, PCE was detected in the View-Master supply well at levels above the MCL. There is no known history of PCE use in the View-Master factory's manufacturing processes. Bruce Gilles, project manager at Oregon DEQ, has observed the presence of low levels of PCE at other sites in which TCE is the primary groundwater contaminant, and speculates that small amounts of PCE might have been present in the solvent-grade TCE product that was used in the past.

Both PCE and TCE are reasonably anticipated to be human carcinogens. The average concentration of TCE found in the View-Master supply well was nearly 300 times the federal safety standard for TCE in drinking water. The average concentration of PCE, by contrast, was less than 9 times the federal safety standard for PCE.

Low levels of cis-1,2-DCE were detected in the supply well. The presence of this substance is probably attributable to the decomposition of other chlorinated chemicals in the well.<sup>1</sup> Cis-1,2-DCE is considered a non-carcinogen by EPA and other organizations. The quantity of cis-1,2-DCE observed in the well was within federal safety limits.

***Q: You mention data on TCE, but the health consultation also mentions MCL. What effects may those chemicals/elevated levels have?***

As stated on page 3 of the Health Consultation report, "MCL" is an abbreviation for the terms "Maximum Contaminant Level". The MCL is set by the U.S. Environmental Protection Agency for Drinking Water Standards. This is the highest amount of contamination that EPA would allow in drinking water. The MCL is a comparison value and does not represent any chemical or contaminant.

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<sup>1</sup> Cis-1,2-dichloroethylene (cis-1,2-DCE) should not be confused with ethylene dichloride. Ethylene dichloride is also known as 1,2-dichloroethane, abbreviated 1,2-DCA. Although ethylene dichloride was used at the View-Master factory for the assembly of projectors and small products (1), ethylene dichloride was not a contaminant found in the supply well.

## Section IV. Questions/Comments about the Meeting Format

***Q: Why can't there be a seminar or workshop for the public to ask questions and get answers as a group?***

It may be possible at a subsequent, smaller meeting to have a seminar-style or panel presentation, but with the large number of people who attended the Jan 28 meeting, it would not have been possible to hold a Q&A meeting because there would not have been enough time to answer all the questions.

In order to respond to all the questions that were gathered at the public meeting on January 28, a number of agencies were consulted, including the Office of Environmental and Occupational Epidemiology of Oregon DHS, the Office of Environmental Services and Consultation of Oregon DHS, Oregon Department of Environmental Quality, Oregon Drinking Water Program, the federal Agency for Toxic Substances and Disease Registry, the Ombudsman's Office for Injured Workers in the Department of Consumer and Business Services, as well as Mattel Corporation. The process of consulting a variety of sources and compiling the answers into this document took several weeks. Clearly it would not have been possible to completely address all these questions during a two-hour meeting.

***Q: There was too large a crowd.***

We contacted several different places to hold the meeting, including larger community centers and hotel conference rooms. The Elmonica School in Beaverton was the only venue that was available for both sessions on January 28, for a fee that was affordable for the state.

More than 300 people attended the public availability sessions, and the Elmonica School multi-purpose room was filled at each session, which indicates of the high degree of interest that this issue has for former workers and community members. In the future we will try to hold the meetings in larger venues, or consider scheduling additional sessions.

***Q: After the session broke to the individual tables it was chaos and it appeared that many people left.***

As people made their way from their seats to the tables where they wanted to have their questions addressed, there was indeed a great deal of noise and distraction. Some people deliberately went outside to have meetings of their own outside, and to view the memorial. From the feedback that we received on evaluation forms, the majority of people (78% of respondents) felt that the information was presented in a way that was helpful and informative.

***Q: Is there going to be another meeting in any other part of the city?***

Although DHS will not be holding any other large meetings in the near future, DHS will consider other possible locations when planning for future meetings. The citizen advisory group (CAG) will hold its first meeting at the Portland State Office Building, and CAG members will decide where future CAG meetings should be held.

***Q: For future meetings, what media sources will be used to notify people in other parts of town?***

We plan to use the same venues and media sources in future meetings that we used for this one. Notification of this meeting went out to all print media, including large newspapers, local neighborhood newspapers, as well as cultural newspapers. Notices also went out to radio stations and cable television. Also, the television stations received the notification.

***Q: Are materials from the meeting available in other languages?***

We had limited translation services at the meeting in Spanish and Vietnamese. If translation is needed for other languages, this can be made available upon request.

***Q: Who paid for the speakers to be at the Jan 28 meeting?***

There was no payment for any of the speakers to attend. The speakers included representatives from state and other local agencies, as well as federal employees who flew in from either Seattle or Atlanta, Georgia. All of these government workers were there as part of their own job. No special payments were allotted to cover either their travel costs or their per diem.

## Section V. The Occupational & Industrial Use of TCE

***Q: What is TCE, why was it used, is it a man-made chemical?***

TCE is a man-made chemical and does not occur naturally. Its presence indicates manufacture, use, or storage. Estimated use patterns suggest that 80% of TCE is used for vapor degreasing of fabricated metal parts in the automotive and metal industries. Consumer products that contain TCE include typewriter correction fluids, paint removers and strippers, adhesives, spot removers, and cleaning fluids for rugs. Before its ban for certain applications in 1977, TCE was also used as a general (mostly obstetric) anesthetic, grain fumigant, disinfectant, pet food additive, and extractant of spices in foods and caffeine in coffee.

***Q: Is TCE used any longer?***

TCE was used at the View-Master factory until 1980, when degreasing operations ceased. TCE was no longer used at the View-Master plant after 1980, but TCE continues to be widely used in other industries.

***Q: What about the handling of TCE and other chemicals without protection?***

Those former workers who happened to handle TCE or other chemicals without personal protective equipment, such as gloves, face masks, or respirators, would be at risk for having additional contact with these chemicals, either on the skin, breathing them, or getting them in their eyes. These certainly are exposures of concern. In the health evaluation, we will be asking about these kind of exposures, so that we can know which workers had these types of exposures, and for what period of time. The potential health effects would vary, depending on the different routes of exposure, and the amount of exposure without protective equipment. If there were ventilation systems in place or other engineering controls, they could help to reduce or mitigate these exposures.

***Q: How is the information collected by the DHS going to be used to effect TCE use?***

The primary purpose of the information that will be collected by DHS is to help former workers understand what were the risk factors that resulted from their exposure, and to help them know what they need to communicate to their health care providers. Because of the unusual nature of the exposures at the View-Master plant, the findings of the proposed health evaluation will help assist industrial facilities or hazardous waste sites where TCE contamination has either been threatened or documented, to direct people in their evaluations of people who have been exposed. Furthermore, this information could and should be used to help protect workers elsewhere in businesses that still use TCE from exposure during the use and handling of TCE, and to help ensure that TCE is properly disposed of, in order to protect people and the environment from contamination.

***Q: Was TCE the only degreaser used? If not, what others were used?***

As far as the DHS has been able to determine in reviewing records and speaking with former workers and employers, TCE was the primary degreaser that was used. We're not aware of other large amounts of degreaser or solvent used in the quantities that TCE was used, and TCE was the primary contaminant found in the supply well. We hope to learn more information than we currently know by interviewing former workers.

***Q: Is there a way to insure that other companies won't be doing similar contamination elsewhere?***

We can't guarantee that companies elsewhere won't cause similar contamination elsewhere. The EPA has passed laws that require that these chemicals be handled and disposed of in ways that are different from the ways they were handled and used at the View-Master facility during the 1950s, 60s, and 1970s. Companies are no longer allowed to dispose of these chemicals in the unrestricted manner as they were in the past. For example, it was legal to dispose of the chemical by dumping it on the ground. Now, by law, TCE must be recycled or disposed of as a hazardous waste in a specified hazardous waste facility.

***Q: Who are the other companies with TCE contamination?***

We do not know what other companies in Oregon are currently using TCE. Companies are not required to register the use of TCE. We do know, however, that there are major sites throughout the United States where TCE contamination has been detected from past use and disposal. Sites that were included in the National Exposure Subregistry for TCE include, among others, the McGraw Edison Corporation in Michigan, Gemeinhardt Company in Indiana, Beloit Corporation, Warner Electric Brake and Clutch Company in Illinois, and Hughes Aircraft Company in Arizona.

***Q: Is there any more or less danger handling metal parts going in and out of the degreaser?***

It is unknown how the risks from breathing vapors or from direct skin contact with pure TCE compare with risks from drinking TCE that is diluted in water. It is possible that a person who handled TCE without protective equipment, and who also drank contaminated water may have greater health risks because of the compounded exposures. We hope to determine whether occupational exposure confers different health risks than exposure to TCE in drinking water by conducting a complete health investigation and interviewing former workers about the jobs they held, what years they worked, how much water they drank, and what health problems they have experienced.

## Section VI. Public Trust

***Q: Why are we looking at the situation differently now than we were in the past?***

From the perspective of DHS, we have not changed our approach. We believe that this is a real, potential public health risk that workers could be facing, and our goal is to gather information and make that information available to workers. What has changed is that we have obtained new information about the causes of death among former View-Master workers, and we're hoping that this new information will help move us forward to be able to carry out the complete health interview study.

***Q: Is information being withheld?***

Although DHS cannot disclose confidential information, DHS provides aggregated information to former workers as soon as it becomes available. As a recent example, DHS completed the analysis of the death data shortly before holding the public meeting in January. Although this information was reviewed by the funding agency (ATSDR) prior to public release, the report was immediately released to the public after review.

The reason that Oregon DHS is conducting this investigation is to identify information that would help former View-Master workers to know what their health risks are, if any. In order to protect confidentiality, we can share only information that is aggregated, as opposed to sharing information about any individual persons.

## Section VII. Community Groups

***Q: What about a support group for former workers?***

Support groups are often times formed by hospitals or medical groups around a particular disease or other condition that can bring people together who are experiencing similar concerns or symptoms to that they can provide help for each other or know what to expect. It would be a great idea for people to consider working through one or the other community groups that already exist to reach out to former View-Master plant workers, such as Victims of TCE Exposure (V.O.T.E.), Environmental Justice Action Group (EJAG), or Oregon Center for Environmental Health (OCEH). From the perspective of DHS, we are planning to assist in the formation of a community advisory group that would work with Oregon DHS to provide insights about the plant's work environment, and input in developing the health study.

Below is the contact information for the advocacy groups VOTE, OCEH, and EJAG:

VOTE: phone 1-800-305-3133, fax 959-564-1804, e-mail [TCEin3D@yahoo.com](mailto:TCEin3D@yahoo.com).

OCEH: phone 503-233-1510, fax 503-233-1528, 516 SE Morrison, Suite 300, Portland OR 97214, e-mail [info@oregon-health.org](mailto:info@oregon-health.org)

EJAG: phone 503-283-6397, P.O. Box 11635, Portland OR, 97211

***Q: Regarding the Advisory Group, who comprises this group?***

We are in the planning stages to assist the formation of the Citizen Advisory Group (CAG), and in the coming weeks DHS will be contacting people who have expressed an interest in joining the CAG. The primary members of the CAG will be made up of former workers and others who they feel would help the group function. The purpose of the group will be to keep former workers and the community informed about our progress, allow former workers to share information with us. Specifically, we hope to gather input that will help DHS develop and refine the appropriate methods for the health study.

## Section VIII. Privacy Issues

***Q: Can we obtain a list of people who have died?***

DHS is not able to release the names of anyone in the health study because state statute (ORS 432.060) requires that we protect the confidentiality of all information that we have received for the purpose of the health study. If you have a family member who worked at the View-Master factory and is now deceased, and would like to make sure that your relative is included in the study, you may contact ODHS at (503) 731-4025 or (503) 872-5356.

The advocacy group VOTE has worked with families to develop a memorial of former workers who have died. VOTE can be reached by phone 1-800-305-3133, fax 959-564-1804, e-mail [TCEin3D@yahoo.com](mailto:TCEin3D@yahoo.com).

***Q: Can I get a list of all the attendees to this meeting and their addresses?***

Because it was a public meeting, upon request we can release the names of the attendees who signed in. We are required to protect the addresses and other contact information for individuals, so that information cannot be released.

## Section IX. Health Care, Insurance, and Financial Compensation

***Q: If I need to see a doctor, who will pay for it? Is there health care provided if you have a problem? Is there a fund to treat former employees who have contracted a form of cancer? I have a cyst on my liver and have been told I need a CAT scan, who pays for this?***

The Oregon Health Plan is the standard Medicaid agency and mechanism for providing health care insurance for Oregonians who qualify. To receive an OHP application packet, call (1-800) 359-9517 or TTY: (1-800) 621-5260. Other than the Oregon Health Plan, there is no state agency or state fund that has resources to provide access or insurance for medical coverage. Unfortunately there is no mechanism in place where state or federal funds can be provided to cover the costs of health care for potential victims from either occupational or environmental contamination.

***Q: What are our rights as humans who were poisoned?***

Former workers should contact the Ombudsman's Office for Injured Workers in the Department of Consumer and Business Services to learn their rights for filing worker compensation claims. The Ombudsman can be contacted 1-800-927-1271 or (503) 378-3351 in Salem. The address is 350 Winter Street, NE, Room 160, Salem OR 97301.

***Q: Have any class action lawsuits been filed?***

Oregon DHS does not know of any class action lawsuits that have been filed.

***Q: What claims have been recorded in Worker's Comp?***

We were told by a representative of Mattel Corporation that through February 2003, up to 30 TCE related workers' compensation claims had been filed by previous employees. To date, no claims have been accepted as either medical only or disability claims.

***Q: Will Mattel stop giving company health exams, and why?***

Mattel announced that company-paid Medical Screening will cease on 12/31/03. According to Mattel, the decision to end the program was based upon declining participation in the Medical Screening Program.

G-1 Holdings, Inc., now the parent company of Sawyer's and GAF, informed Mattel in December 2002 that they were immediately stopping Medical Screening for former Sawyer's and GAF employees. We don't know why G-1 holdings made this decision. Former workers who wish to inquire further may contact G1-Holdings by phone at (973) 628-4126, by e-mail at [jcalkin@gaf.com](mailto:jcalkin@gaf.com), or by mail at G-1 Holdings Inc., 1361 Alps Road, Wayne NJ, 07470.

***Q: Is it a coincidence that screening was stopped when the health consultation report was released?***

According to Mattel, the decision to phase out the screening exam program was made in December 2002, prior to the release of the Health Consultation Report. These two events were unrelated to each other.

***Q: Where can I go for a physical exam or to get tested? Can I use my own physician for the screening exam and be reimbursed?***

According to Mattel, former workers of Mattel or Mattel's subsidiaries and their eligible children can go to any doctor of their choice to receive the medical screening exam. Mattel also provides a list of doctors experienced in industrial medicine if you want to see a specialist or if you do not have a doctor. Former employees should contact Mattel at (503) 293-8466 for Medical Screening packet prior to scheduling the exam, noting that the Medical Screening will cease on 12/31/03.

***Q: What does the health screening comprise? Can health forms be given to us to take to our doctors with the questions pertaining to our exposure?***

According to Mattel, the adult Medical Screening Exam includes a form to be completed by the patient before giving it to the doctor, so that the doctor has a medical history and information about the patient's TCE exposure to help guide the exam. The protocol then includes a general physical exam, a urinalysis and blood profile tests. In some cases, the doctor may also decide to include a chest x-ray.

The children's Medical Screening Exam includes a form, to be completed by the adult, so that the doctor has a medical history to help guide the exam. The protocol then includes an analysis of motor, sensory, communication, social, cognitive and adaptive skills (based upon age), a general exam, a urinalysis, blood profile tests, and EKG. In some cases, the doctor may also decide to include a chest x-ray.

For more information or to obtain materials for the Medical Screening Exam, please contact Mattel at (503) 293-8466.

***Q: Where can people from GAF/Sawyers go for testing?***

Former GAF/Sawyers workers may visit their own doctor and determine together what tests would be appropriate. If they are uninsured, they may be eligible for insurance coverage under the Oregon Health Plan. To receive an OHP application packet, call (1-800) 359-9517 or TTY: (1-800) 621-5260.

***Q: Why would Mattel pay full cost of a medical screening only if given by one of their four chosen doctors, instead of reimbursing a physician of my choice and covering only \$250 towards a full medical screening (as opposed to just blood & urine)?***

According to Mattel, “Mattel will cover more than \$250 for adults, or more than \$550 for eligible children, if the tests are those described in the protocol for the medical screening exam, and if the doctor gets prior approval from Mattel for the additional costs. Mattel employees should contact Mattel at (503) 293-8466 for Medical Screening instructions prior to the actual exam. Mattel employees and eligible children can go to any doctor of their choice. Mattel also includes a list of doctors experienced in industrial medicine if it desired to see a specialist or if they don’t already have a doctor.”

***Q: How can we make Mattel keep paying for the health screenings until we know the long-term effects?***

DHS unfortunately does not have the answer to this question. We suggest that you direct further inquires or suggestions to Mattel by calling (503) 293-7343 or (503) 293-8466.

## Section X. The Health Consultation Report

***Q: Was study data taken from death certificates?***

The data that we reviewed for the health consultation report was obtained from the National Death Index, a computerized database that receives information from state vital records departments about individual cases of death and those causes of death. The study that was done for the current report involved using these electronic data, rather than actual death certificates.

***Q: Are EPA's new toxicity standards used in the health consultation?***

EPA has released new guidelines for TCE called "cancer slope factors." Cancer slope factors are theoretical risk parameters that are used for determining site cleanup standards. These factors may also be used in initially determining whether a particular site may pose a threat to public health. EPA's new guidelines call for more stringent goals in site cleanup. Oregon DEQ has incorporated EPA's new guidelines to ensure that site cleanup measures are as protective to human health as possible.

The EPA guidelines do not directly apply to epidemiologic investigations. These types of studies examine actual exposures and health outcomes, as opposed to theoretical risks. EPA uses the results of such epidemiological investigations to develop cancer slope factors. The View-Master health consultation report and the proposed health interview study therefore do not use EPA's new toxicity guidelines. Conversely, they may be able to provide important new information that could shape EPA's future guidelines.

***Q: How to send comments?***

Official comments about the health consultation report should be sent to ATTN: Chief, Program Evaluation, Records, & Information Services Branch, Agency for Toxic Substances and Disease Registry, 1600 Clifton Road (E60), Atlanta, GA 30333. Instructions on how to submit comments were provided on the second page of the health consultation report. The comment period was originally scheduled to close on February 28, 2003, but was extended to March 28, 2003. Although the public comment period has now formally ended, DHS would welcome any additional comments on the health consultation report, for consideration in future efforts by DHS to develop the proposed health study.

## Section XI. The Proposed Health Study

***Q: How do we get extra funding needed for this study?***

DHS is presently seeking funds from federal public health agencies, including ATSDR and CDC, as well as NIOSH. Former workers and community activist groups can help by working together with DHS to develop study methods and identify possible sources of funding.

***Q: What is the ultimate goal of the study?***

The goal of the health study is to determine whether former workers of the View-Master factory have an increased risk of adverse health and reproductive outcomes associated with exposure to TCE. This is an important goal because former workers want to know what the likelihood is of developing disease, or the likelihood that their medical conditions were associated with their exposure to TCE. Additionally, the findings of the View-Master health study may provide important new information that could be applied to other sites in the United States.

***Q: What is an epidemiologic investigation?***

An epidemiologic investigation evaluates whether there is a relationship between a particular exposure and disease, by examining the distribution of diseases and exposures in a given population. In the proposed View-Master health study, we will be examining health and reproductive outcomes among former View-Master workers to determine whether patterns of adverse outcomes emerge among the former View-Master population, as opposed to any one person. In summary, an epidemiologic investigation assesses the health of a group of people or a community, as opposed to a physician who assesses an individual patient's health.

***Q: Who are we waiting for to go forward?***

We are looking for the necessary funding to begin the health study. DHS has received funding for two years to conduct a feasibility study – in other words, to determine whether it would be possible and worthwhile to conduct a complete epidemiologic investigation based on existing information about the site, and about former workers of the plant. Oregon DHS has concluded from the feasibility study that the View-Master contamination posed a hazard to public health, and that there is an urgent need to thoroughly investigate the health impacts of the contamination on people who were exposed, by conducting a full health study.

Funding for the feasibility study will end in September 2003. For the remainder of the current budget period, DHS's goal is to develop the study proposal to help solicit future funding for the full epidemiologic investigation. DHS will rely on the input of former workers through the citizen advisory group (CAG) for developing materials and methods for the study.

Former workers who are interested in helping to move the study forward can help by joining the CAG and working together with DHS. You can contact DHS by calling (503) 731-4025.

***Q: How valid is a study conducted twenty years after the fact?***

The quality of the information gained through interviews is based on accuracy of recall of the information of former workers. Recall error is a potential problem that retrospective studies often face, but there are methods to reduce such error, or to examine the extent to which recall error may affect results.

In some cases, the delayed onset of a study to twenty years or more after exposure is advantageous from an epidemiologic perspective, in that some diseases such as cancer may take decades to show up. The prolonged period after exposure has potential advantages for detecting an effect that could be linked to the exposures at the View-Master plant.

***Q: Will there be follow-up on pregnant women and their children?***

In the proposed health interview study, we will be gathering information from both men and women about reproductive histories and birth outcomes, as well as health outcomes of their children.

***Q: Is the intent of the survey to follow us for the rest of our lives?***

No. The intent of the health evaluation study is to assess the exposures that people had and see if they link to any demonstration of health problems in people as of now. DHS will share the findings of the study with the former workers.

***Q: How do I become a part of the study?***

You can call DHS at (503) 731-4025 or (503) 872-5356 and provide your address and phone number so that we will be able to contact you when we are ready to begin the study.

***Q: How will you determine the level of exposure for people who worked at different periods of times, and for different lengths of time? Can we determine when the contamination of the well started?***

We will need to gather detailed information from former workers in order to examine several factors that affect individual levels of exposure:

- 1) How long a person worked at the factory
- 2) Amount of water a person drank
- 3) Specific job duties
- 4) The calendar years a person worked at the factory

For the first factor, how long a person worked at the factory, we will look at the total amount of time a person was employed. Some people may have stopped and started working at the plant over several periods of time, and we will need to add up all these different times.

For water consumption we will ask people to estimate how much water they drank on a daily basis, in order to estimate the total amount of water consumed during the time they worked there.

Because some people worked directly with TCE in the degreasing operations, while for others the only possible route of exposure was through drinking water, we will need to ask people detailed information about the specific jobs they held during their employment at the factory.

It will also be important to take into account the specific calendar years that a person worked at the factory because the levels of TCE in the supply well may have changed over the course of time. ATSDR is developing an environmental analysis to help determine how long ago the water first became contaminated, and what were the levels of TCE in the water throughout the factory's operation. Oregon DEQ has estimated that the TCE was in the groundwater as long as 20 years prior to its discovery in 1998. Through detailed groundwater modeling analyses, ATSDR hopes to confirm or refine DEQ's estimate of when TCE first reached the supply well.

***Q: How much water did you have to consume to be affected, or does it matter?***

We don't know the answer at this time. The only way to find out how people were affected is to perform a full health investigation that would involve interviewing the thousands of people who worked at the factory to find out how much water they consumed as well as other exposure factors, and what health problems they have experienced.

***Q: Are you contacting all former workers?***

Our goal is to contact all former workers so that we can get complete information on the entire group of people at risk, but at present we do not know who all former workers are, or how to contact them. Mattel has given us a list of 13,700 former workers, of whom roughly 6,500 have current address information. We are asking former workers, or the families of deceased former workers, to contact us and also to contact other former workers they know, so that we can reach as many people as possible. You can call DHS at (503) 731-4025 or (503) 872-5356 to provide your contact information or to make sure that your name (or your relative's name) is on the list of former workers.

***Q: How can I find out how long my brother was employed at the plant and what his job was?***

We don't know what is the best way to obtain this information. If you are a surviving next of kin, you may be able to obtain this information from the Social Security Administration. If your brother worked for Mattel or Mattel's subsidiaries, Mattel may have record of your brother's employment. You may contact Mattel at (503) 293-7343 or (503) 293-8466 for further inquiry. DHS asks that family members of former workers contact DHS at (503) 731-4025 or (503) 872-5356, to represent former workers who are unable to participate in the study, or are no longer living.

## Section XII. Safe Drinking Water Regulations

***Q: Why wasn't the water tested? Why didn't the state demand chemical analyses in the late 80s and early 90s?***

None of the plant operators filed any records with the Drinking Water Program at Oregon DHS regarding the existence of a drinking water well on the Hall Street plant. DHS was first notified about the well in 1998 after the TCE contamination was discovered. The DHS Drinking Water Program had no reason to suspect that this plant was operating a well, since the facility was located in a dense urban area and served by city water.

***Q: I understand that View-Master submitted bacterial analysis tests, but not chemical, why didn't the state enforce compliance?***

According to Mattel, the factory's Maintenance Department routinely tested the well water for bacteria. The factory did not however, submit any of the results of those tests to the Oregon Drinking Water Program, nor did it ever report the use of the well as a drinking water system. The state therefore has no record of any bacterial tests that might have been conducted. We don't know why these test results were not reported to the state, if they were in fact being conducted. For further inquiries, please contact Mattel at (503) 293-7343.

***Q: What laws were broken? Were there dates when the water should have been tested?***

Water suppliers, in this case Sawyers, GAF, View-Master International, Tyco and Mattel, were responsible to assure that the water delivered to water users did not exceed federally established maximum contaminant levels (MCLs). These owners of the water system were responsible for reporting the water quality test results to the EPA, and later to the DHS Drinking Water Program. This reporting requirement is intended to assure that water system facilities are free of public health hazards and that water system operation and maintenance are performed as required by the rules. In general, the system operators are responsible for the following:

- 1. Routine collection of water samples for laboratory analysis at prescribed frequencies.***
- 2. Corrective action when results of analyses or measurements indicate that MCLs have been exceeded.***
- 3. Reporting of results to DHS and others as prescribed.***
- 4. Notify all users of the system when maximum contaminant levels have been exceeded.***
- 5. Notify all users served by the system when the reporting requirements are not being met, when public health hazards are found to exist, or when the operations of the system is subject to a permit or variance.***
- 6. Maintain monitoring and operating records and make records available when systems are inspected.***
- 7. Maintain pressure of at least 20 pounds per square inch (PSI) at all times.***
- 8. Follow up on complaints relating to water quality from users and maintain records and reports on actions undertaken.***
- 9. Submit plans prior to new construction or major modifications to systems.***

EPA established drinking water standards for VOCs such as TCE in 1987, and included a four-year phase-in schedule for initial monitoring by public water suppliers beginning in 1988. Monitoring public water systems for TCE was first required of non-transient, non-community public water systems, such as the Hall Street Plant well, in Oregon beginning in 1991.

***Q: Why wasn't the water tested in 1970, or before 1988?***

Testing public water systems for VOCs was not required in 1970. Federal requirements for public drinking water systems were enacted in 1974 under the Safe Drinking Water Act (SDWA). Monitoring of public water systems for volatile organic compounds (VOCs) was added in 1986 to Oregon Administrative Rules (OARs) under the Oregon Drinking Water Quality Act. The View-Master facility was not required by law to conduct VOC testing in 1988, but would have been required to begin testing the well water for VOCs beginning in 1991, when the definition of a Non-Transient Non-Community Public Water System was introduced to the OARs.

## Section XIII. Past Levels of TCE

***Q: What was the TCE level in 1970, when TCE was still being dumped? When did contamination occur?***

It is not known what past levels of TCE were in the View-Master supply well. The View-Master supply well was not tested for TCE prior to 1998. ODHS and ATSDR are planning an environmental exposure assessment to help determine when the contamination first occurred, and what concentrations of TCE there may have been in the past.

***Q: How much TCE would need to be in the water before you could taste or smell it?***

Most people can begin to smell TCE in air when there are around 100 parts of TCE per million parts of air. There is no data on the thresholds for the taste or odor of TCE in water.

***Q: Why was the water tested in 1998? When was TCE discovered?***

The water was tested in March 1998 as part of a due diligence investigation for the benefit of a potential site developer. The site developer contracted with an environmental consulting firm to conduct a site assessment of the View-Master facility.

***Q: Where was the TCE dumped, are those areas being tested?*** (Landau report)

An extensive environmental investigation tested air, soil, and water at various locations and depths. The investigation identified four primary source areas, including two areas where disposal of degreaser sludge occurred. The four primary source areas were the former septic tank and drain field, the former paint shop and degreaser area, (a sludge disposal area at the east end of Parcel 3, and the sludge disposal and burn area on the southwest corner of Parcel 3). For further inquiries, please contact Oregon DEQ at (503) 229-6662.

## Section XIV. Factory Water Supply & Maintenance

***Q: Who determined, or how was it determined, that the well casing was cracked or broken?***

A former employee recalled this incident at the public meeting. We asked Mattel for comment. According to Mattel, there is no existing documentation about a cracked or broken well casing. Mattel told us, “historically, the Maintenance Department would investigate and/or correct any type of equipment questions or failure, including the well casing. If special skills were needed to complete a repair it would have been common to retain other experienced or licensed vendors.”

***Q: When did the plant go to city water?***

Factory records indicate that in 1956, Sawyer's joined the Progress Water District for fire control and prevention purposes. Water lines were installed that supplied the facility sprinkler system, some hydrants, and as a backup water supply to the water tower.

***Q: Why were reports of the drinking water “burning” answered that the water was being tested?***

DHS did not receive reports or complaints about the drinking water prior to the discovery of TCE. DHS asked Mattel for comment in response to this question. Mattel told us, “Maintenance Department employees report that the well water was regularly tested for bacteria.” For further inquiries, please contact Mattel at (503) 293-7343.

## Section XV. The Role of Factory Operators

***Q: Has anyone checked financial records (mergers) for info on testing regulations? Banks require water testing before providing loans for home purchases, why wasn't this required of the Hall Street plant? Are we sure that the wells were not tested and that these companies didn't know about the level of contamination?***

DHS referred this question to Mattel Corporation. According to Mattel, financial and other historical records at multiple U.S. locations have been audited, and it appears that lending institutions were satisfied with the loan information sought although we do not know the specifics of such requests. Mattel stated, "There is no reason to believe that the factory operators had any knowledge of TCE within the well water prior to the March 1998 well tests. The state has been informed about existing records and has also been assured that they will be notified in the unlikely event that additional records are discovered."

***Q: Can you contact former supervisors for information?***

At this time we don't know who all the former plant supervisors are. DHS plans to contact as many people who worked at the plant as possible, including supervisors. We recognize that former workers have information about plant processes and exposures, as well as the names of other former workers that we don't know about. We encourage former workers to share information with DHS directly by calling (503) 731-4025. We hope to gain additional information through the Citizens Advisory Group that is being formed.

***Q: How cooperative have past owners been?***

GAF Corporation is in bankruptcy proceedings, and has been unable and/or unwilling to assist DHS with the health investigation and has not released any information regarding their former employees. Mattel has assisted DHS by providing a list of 13,700 former employees, and has included information from DHS in mailings to former workers.