

Responses to Comments, Concerns, and Questions

Version 100410

No.	Topic	Comment/Question	Responding Agency	Response
No.	Topic	Comment/Question		
1	Air	What testing has been done regarding the air quality in Frederick County?	MDE	<p>The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: (1) sulfur dioxide, (2) particulate matter, (3) carbon monoxide, (4) nitrogen dioxide, (5) ozone, and (6) lead. The primary standards were established to protect public health and the secondary standards were developed to protect against non-health effects such as damage to property and vegetation.</p> <p>The Maryland Department of the Environment operates an air-monitoring network throughout the State, in accordance with EPA guidelines, to measure the concentrations of the criteria pollutants in ambient air. These measurements have been used to project statewide ambient air quality and have indicated that the Frederick County vicinity meets the ambient air quality standards for sulfur dioxide, particulate matter, carbon monoxide, nitrogen dioxide, and lead.</p> <p>Ground level ozone continues to present a problem for the Washington Metropolitan area, which is classified as a nonattainment area for ozone. Fort Detrick is part of the DC non-attainment area for ozone. The primary contributors to the formation of ozone are emissions of nitrogen oxides and volatile organic compounds.</p> <p>Additionally, EPA has designated Frederick County as non-attainment for fine particulate matter (PM<sub>2.5</sub>, particulate matter with a nominal diameter of 2.5 micrometers or less). EPA has recently published guidance for implementing PM<sub>2.5</sub> non-attainment programs. In accordance with the EPA guidance, a source is major for PM<sub>2.5</sub> if it emits or has the potential to emit 100 tons per year of PM<sub>2.5</sub>. The Fort Detrick facility is not a designated major source of PM<sub>2.5</sub>.</p>

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2	Air	Why isn't there a coordinated response among agencies on addressing Area B?	MDE	Ongoing coordination between the Maryland Department of the Environment and the U.S. Environmental Protection Agency has been used to address Area B. This effort also reflects a significant amount of coordination within each agency. The community meetings coordinated by the Frederick County Health Department serve as another mechanism to reinforce the coordination among the various state and federal agencies.
3	Air	What is the end game in assuring safety?	EPA	At Fort Detrick, Area B has been placed on U.S. EPA's National Priorities List, which is part of its Superfund program. This grants U.S. EPA the authority to oversee the Army's investigation of the site and to ensure that the Army takes all actions necessary to protect public health and the environment from site-related contamination.
4	Air	What are the pollutants?	MDE	The known contaminants in groundwater beneath Area B include tetrachloroethene (PCE) and trichloroethene (TCE). However, under EPA's supervision the Army is conducting a new remedial investigation of the groundwater beneath Area B, which includes the taking of environmental samples which will be collected and analyzed for their chemical content (type and concentration). Other pollutant could be identified during the course of this new investigation. The most significant pollutants associated with the Fort Detrick incinerators include the following: hydrogen chloride, particulate matter, carbon monoxide, dioxins and furans, sulfur dioxide, nitrogen oxides, lead, cadmium, and mercury. There are many other known toxic air pollutants that are discharged from incinerators in trace quantities. See also response to comment #5.

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	5 Air	Were toxins emitted from incinerators?	MDE	<p>Fort Detrick currently has four incinerators at the main base - Area A. They include two medical waste incinerators, each capable of processing up to 0.5 ton per hour medical waste; and two small municipal waste combustors, each capable of processing up to 1.5 tons per hour of municipal solid waste. Each of these units are equipped with rotary atomizing scrubbers designed to control emissions of particulate matter, heavy metals and acid gases. The air emissions from these incinerators are subject to very stringent Federal rules developed under the Clean Air Act (1990), sections 111(d)/129. The Federal rules address the emissions of criteria pollutants (sulfur dioxide, nitrogen dioxide, carbon monoxide, volatile organic compounds, particulate matter, and lead) and non-criteria pollutants such as hydrogen chloride, cadmium, mercury, and dioxins/furans.</p> <p>With regard to toxic air pollutants (TAPs), screening levels (i.e., acceptable ambient concentrations for toxic air pollutants) are generally established at 1/100 of allowed worker exposure levels. The Department has also developed additional screening levels for carcinogenic compounds. The additional screening levels are established such that continuous exposure to the subject TAP at the screening level for a period of 70 years is expected to cause an increase in lifetime cancer risk of no more than 1 in 100,000. The Fort Detrick incinerators are required to perform routine stack testing in order to demonstrate compliance with both federal and State emission standards. Based on these stack test results, Fort Detrick is in compliance with both the Federal and State regulatory requirements for air emissions. In addition, the same controls would reduce emissions of other unregulated toxic air pollutants.</p>
	6 Air	Believe the Ft. Detrick smokestacks caused 12 cancers in my family.	MDE	<p>All of the incinerators at Fort Detrick are in compliance with both federal and State regulatory requirements. This includes annual certification of compliance with the State's Toxic Air Pollutant regulations, which are a health based standard.</p>

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7	Air	Learned about vapor intrusions potential.	EPA	Vapor intrusion (VI) refers to the migration of volatile chemicals from the subsurface into occupied buildings. As a general rule of thumb, the potential for VI of concern exists when structures are within 100 feet (horizontally and vertically) of volatile chemicals in the subsurface. The Army will conduct a vapor intrusion study as part of the new Remedial investigation for Area B. The vapor intrusion study will include the collection of soil gas samples through the foundations of occupied buildings that are known or suspected to be within 100 ft. of the PCE/TCE groundwater plume.
8	Air	Mr. White reports being told of trucks and planes spraying Agent Orange.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
9	Air	As a child in the 50's saw plumes of orange and blue smoke emitted from Area B.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
10	Air	Consider Hydrogen Fluoride produced by East Alco.	MDE	East Alco has been inactive for a number of years and has not been a source of fluoride emissions in the Frederick County region since it officially shut down in 2005. Regardless, Maryland has had a State ambient air quality standard for fluoride in effect since 1980. These standards impose limitations for fluoride concentrations in crops as well as gaseous fluoride concentrations for the ambient air. There is no documented instance of a violation of these standards on file.
11	Air	Lived next to Area B and recall "stuff" coming down onto his kids.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
12	Land	Ditto Avenue – Ft. Detrick—gave food that was grown there to the Food Bank –why give food from that area without a concern?	EPA	U.S. EPA was not involved with the Food Bank effort. This question will be directed to Fort Detrick.

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13	Land	Land quality—site B—pathways that could spread?	EPA	This question seems to refer to the migration of contamination from one environmental medium (such as soil) to another (such as ground water or air). Movement of this sort can occur, depending upon many factors (such as the type of contamination, nature of the medium, and the method of disposal). As part of the new Remedial Investigation, the Army is conducting surface water and sediment sampling to determine whether contamination from Area B has migrated off-site. Additionally, the Army will be conducting a new dye trace study of the karst geology to identify groundwater flow pathways from Area B.
14	Land	Besides Area B, Agent Orange, what else is out there?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
15	Land	What are we being polluted with?	EPA	As stated above, the contaminants of concern in groundwater beneath Area B which have been identified to date include tetrachloroethene (PCE) and trichloroethene (TCE). However, in the course of completing the new remedial investigation of the groundwater beneath Area B, an analysis will be conducted for a wide range of potential pollutants including metals, semi-volatiles, pesticides, herbicides, and volatiles. Additionally, the EPA has requested that the Army undertake an Archives Search Report to identify all materials used, tested, and disposed of at Area B over time.
16	Land	Where did the stuff go besides at Area B?	EPA	The NPL listing of Fort Detrick included only Area B. The question of disposal activity at other areas of Fort Detrick will be directed to the Army and the Maryland Department of the Environment.

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17	Land	What is buried in site B?	EPA, MDE	<p>Area B is roughly 399 acres, and includes 8 landfill/trenched areas that have been identified to date. Area B was established as a proving ground in the Army’s Biological Warfare program. Later, Area B was used as a disposal area for chemical, biological, and radiological (CBR) material and until 1970 for biological experimentation.</p> <p>Area B has been the primary location of waste management activities for Fort Detrick and is the location of an active municipal landfill, animal farm, former skeet range, former explosives storage area, and former waste disposal/test areas associated with former research activities. In the late 1940s, the Special Operations Group of Fort Detrick installed a test grid in Area B to test both live and simulant biological warfare (BW) materials. A list of the live agent materials used in Area B is not available, but it is known that simulant materials used included <i>Bacillus globigii</i>, <i>Serratia marcescens</i>, and <i>Escherichia coli</i>. Test animals were buried in trenches or pits located in Area B after autoclave sterilization. Many types of munitions were tested on the test grid in Area B.</p> <p>Anthrax was buried in Area B. In addition, radiological tracer materials were reportedly buried at three locations in Area B, including radioactive carbon, sulfur, and phosphorous. Two cylinders marked “Phosgene” were also reportedly buried in Area B. Phosgene is considered a lethal chemical agent.</p> <p>In 1970 and 1971, after the United States outlawed biological research for offensive operations, a decontamination program was initiated for Fort Detrick. Decontamination procedures for residual biological/chemical research materials included autoclave steam sterilization and incineration. Incineration ash was tilled into soil in the northwestern corner of Area B (Pit 13). Research buildings and equipment were also decontaminated, and an extensive wipe sampling program was completed after decontamination. In addition, sewage drainage lines were cut and capped, and drainage systems were filled with hypochlorite solution.</p>
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	17 part 2	Response continued ..... What is buried in site B?	EPA	<p>In 1977, severe soil erosion exposed buried scrap materials and created several deep cavities in Area B. The areas were subsequently covered with soil. In June 2004, a removal action was completed at Area B-11, an Area B chemical disposal area. Activities completed included the removal of contaminated soil, chemical containers, compressed gas cylinders, and laboratory waste. The discovery of live pathogens in medical wastes at Area B-11 caused suspension of all intrusive work at the disposal area. The southwestern portion of Area B contains three known chemical waste disposal pits (Pits 1, 3, and 4), one suspected chemical waste disposal pit (Pit 2), and one ash disposal pit. Area B-11, also known as Pit 11, is reported to have received various types of waste chemicals from Fort Detrick, the National Bureau of Standards, and the Walter Reed Army Medical Center from 1955 to 1970. Reportedly, eight 55-gallon drums of TCE were disposed of in Pit 1. Wastes disposed of in the pits included metals, wood, general waste from laboratory modifications and building demolition, refuse from housing and animal farm operations, acids and chemicals, incinerated medical waste, waste herbicides and insecticides, phosgene, and animals potentially contaminated by anthrax. Area B-11 is underlain by solution-weathered limestone of the Frederick Formation, a karst formation aquifer. Solution features such as voids were identified in Area B-11 during the installation of monitoring wells. The voids are 10 to 87 feet long and were encountered with the greatest concentration in the first 100 feet of drilling. Drilling in Area B-11 revealed that bedrock is located at 32 to 33 feet below ground surface (bgs). The nature of karst conditions in Area B-11 increases the probability of releases to ground water from wastes disposed of in Area B-11. Wastes may have been disposed of directly into karst solution cavities (voids). All of these disposal activities could have resulted in ground water contamination.</p> <p>As mentioned previously, the EPA has requested that the Army undertake an Archives Search Report to identify all materials used, tested, and disposed of at Area B over time. Such historical information will aid in determining what potentially could exist at Area B.</p>
18	Land	Dioxins could be bought everywhere. Invented in the 40's for multiple uses.	MDE	

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19	Water	<p>Status of water in Frederick County:</p> <ul style="list-style-type: none"> <li>• Problems from Detrick spread?</li> <li>• Coordinated response needed</li> <li>• Procedures to clean up contaminants</li> <li>• Oversight of Ft. Detrick needed</li> </ul>	EPA, MDE	<p>In June 2004, a removal action was completed at Area B-11, an Area B chemical disposal area. Activities completed included the removal of contaminated soil, chemical containers, compressed gas cylinders, and laboratory waste. The discovery of live pathogens in medical wastes at Area B-11 caused suspension of all intrusive work at the disposal area. The southwestern portion of Area B contains three known chemical waste disposal pits (Pits 1, 3, and 4), one suspected chemical waste disposal pit (Pit 2), and one ash disposal pit. Area B-11, also known as Pit 11, is reported to have received various types of waste chemicals from Fort Detrick, the National Bureau of Standards, and the Walter Reed Army Medical Center from 1955 to 1970. Reportedly, eight 55-gallon drums of TCE were disposed of in Pit 1. Wastes disposed of in the pits included metals, wood, general waste from laboratory modifications and building demolition, refuse from housing and animal farm operations, acids and chemicals, incinerated medical waste, waste herbicides and insecticides, phosgene, and animals potentially contaminated by anthrax. Area B-11 is underlain by solution-weathered limestone of the Frederick Formation, a karst formation aquifer. Solution features such as voids were identified in Area B-11 during the installation of monitoring wells. The voids are 10 to 87 feet long and were encountered with the greatest concentration in the first 100 feet of drilling. Drilling in Area B-11 revealed that bedrock is located at 32 to 33 feet below ground surface (bgs). The nature of karst conditions in Area B-11 increases the probability of releases to ground water from wastes disposed of in Area B-11. Wastes may have been disposed of directly into karst solution cavities (voids). All of these disposal activities could have resulted in ground water contamination.</p>
20	Water	<p>What other "things" are out there?</p>	EPA	

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21	Water	<p>What tests are being done or need to be done other than site B? Buried, Incinerated, Landfill, Cleanup is a must.</p>	EPA, MDE	<p>As mentioned previously, the EPA has requested that the Army undertake an Archives Search Report to identify all materials used, tested, and disposed of at Area B over time. Such historical information will aid in determining what potentially could exist at Area B.</p>
22	Water	<p>40,000 ppt TCE/PCEfound in past.</p>		<p>In 1970 and 1971, after the United States outlawed biological research for offensive operations, a decontamination program was initiated for Fort Detrick. Decontamination procedures for residual biological/chemical research materials included autoclave steam sterilization and incineration. Incineration ash was tilled into soil in the northwestern corner of Area B (Pit 13). Research buildings and equipment were also decontaminated, and an extensive wipe sampling program was completed after decontamination. In addition, sewage drainage lines were cut and capped, and drainage systems were filled with hypochlorite solution.</p>
23	Water	<p>Sewer system--decon (leakage), many leakages known about</p>	FD	<p>Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.</p>

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24	Water	Dioxin above limits	EPA	<p>The term "dioxin" refers to a group of chemicals with fairly similar structures (called congeners), but different cancer potencies. To correct for the differences indifferent congeners propensity for causing cancer, internationally-accepted toxicological practice is to convert each congener to a concentration that would be equivalent to the most toxic form of dioxin, 2,3,7,8-TCDD. It is this congener (2,3,7,8-TCDD) that is associated with Agent Orange. The only dioxin results reviewed by U.S. EPA thus far were submitted by John Bee on behalf of the Kristin Renee White Foundation. These soil samples, when evaluated in terms of 2,3,7,8-TCDD equivalents (2,3,7,8-TCDDeq , revealed dioxin levels (up to 7.89 ppt 2,3,7,8-TCDDeq) that are within the background range expected for rural areas of the U.S. (up to 11 ppt 2,3,7,8-TCDDeq ). None of the levels reported in the referenced sampling effort exceed U.S. EPA's current residential clean-up standard for dioxin (1000 ppt 2,3,7,8-TCDDeq), proposed interim Preliminary Remediation Goal (72 ppt 2,3,7,8-TCDDeq) or risk-based concentration for residential exposure (450 p p t 2,3,7,8-TCDDeq , at an excess cancer risk of 1 in 10,000). As part of the ongoing investigation of Area B, EPA and MDE are discussing how best to conduct dioxin sampling for both on-post and off-post locations. This effort should provide more thorough coverage than the limited dioxin sampling conducted to date, and should capture the extent of dioxin contamination, if any, in the vicinity of the Area B.</p>
25	Water	Public notification needed	FD	<p>Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.</p>
26	Water	Treatment/quarantine occurred for sewer system workers	FD	<p>Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.</p>

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27	Water	Ft. Detrick pumping large amounts of water (planned)	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
28	Water	Who was informed of plans to pump large amounts of water?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
29	Water	Ft. Detrick not keeping public informed	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
30	Misc.	Why are activities at Ft. Detrick continuing?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
31	Misc.	Worked at Detrick as an operator—lost her hearing, was given stuff to put in her ears. [repeat of question entered further down]	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
32	Misc.	When she worked at Transit around 1998, a pipe broke. What was done about that?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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33	Misc.	PATH substation coming to area—Electromagnetic field concern.	MDE	<p>The following information is from the Power Plant Research Program of the Maryland Department of Natural Resources: Electric and magnetic fields, also called electromagnetic fields (EMF), occur both naturally and as a result of the generation, transmission, and use of electricity. In today’s society, where the use of electricity is extensive, exposure to EMF from the vast array of electrical appliances and equipment, building wiring, distribution lines, and transmission lines is common. Electromagnetic fields are fields of force created by electric voltage and current. They occur whenever power lines are energized.</p> <p>The potential health effects of exposure to EMF in the extremely low frequency (ELF) range, such as that emitted by power transmission facilities, has been the subject of intense scientific and public scrutiny for almost 30 years. In 1989, the Maryland Public Service Commission (PSC) issued an order requesting that reports of scientific evidence regarding the possible adverse health effects from exposure to the electric and/or magnetic fields produced by electric power lines be monitored, and periodic reports be submitted to the PSC. As such, an overview of key journal articles, reports, and reviews published in scientific literature is routinely prepared by the Maryland Department of Natural Resources, Power Plant Research Program (PPRP) on behalf of the Maryland PSC.</p> <p>While more than one thousand studies are available, varying in both quality and relevance to the issue of potential health impact, little has changed in the recent scientific record that is likely to cause health agencies to re-evaluate their views about the EMF exposure. Maryland is one of the few states to retain an EMF program. PPRP continues to serve as a source for information for Maryland citizens, answering inquiries about EMF health effects and exposures. Additional information is accessible via the following web link:  <a href="http://www.niehs.nih.gov/health/topics/agents/emf/">http://www.niehs.nih.gov/health/topics/agents/emf/</a></p>
34	Misc.	Trucks—7 years ago homeowners received a letter from Detrick but there was no follow-up plan.		<p>Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.</p>

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35	Misc.	Why isn't there a coordinated response as to what is going on to make people feel safe, to clean up, put a cap on Area B so stuff can't leak out?	EPA	As stated above, Area B ground water and associated sources will be assessed during the Remedial Investigation (RI). The generated data will be shared among Federal, State and Local government agencies (including EPA, ATSDR, MDE and the Health Departments, as well as Ft. Detrick). These entities will be in communication regarding all relevant issues and decisions, including those associated with the investigation and any clean-up efforts. Remedial options for the site will be determined after the investigation is complete. It should be noted that a significant portion of Area B was recently capped.
36	Misc.	What is being done to not have this happen again?		Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
37	Misc.	When you work at Ft. Detrick, you live in fear. They need a safe area for employees to contribute to dialogues and body language—give a list of the chemicals so people know.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
38	Misc.	People want to hear from Ft. Detrick.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
39	Misc.	Detrick violated trust—public are unaware of activities at Detrick—information not put out to the community.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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40	Misc.	Where are the Alderman and other government representatives to represent the people? Commissioner Gray was the only one there. We need representation.	FCHD	The City of Frederick Board of Alderman meeting conflicts with the first Thursday of the month meetings so the future meeting schedule will be changed to accommodate their schedule.
41	Misc.	Ft. Detrick has no control over NCI.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
42	Misc.	Road workers digging on Shookstown Road—are these workers at any risk with digging up the dirt?	FCHD	The road workers work for a contractor performing work on a City of Frederick pipe project. Soil analysis had been performed prior to the initiation of work as is standard to identify anything that might affect the pipes. Further soil testing recommendations are pending from the other agencies involved in the development of the future testing work plan (Remedial Investigation).
43	Misc.	A letter from Ft. Detrick through Analytical Services which the homeowner had to sign for in Cloverhill—Cloverhill Association is concerned and very upset over this. Public notification—how accessible is it?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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44	Cancer	Concerns for health of contractors at Ft. Detrick	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
45	Cancer	What types of cancer are being found and where?	FCHD	The Department of Health and Mental Hygiene and the Frederick County Health Department are looking at many different kinds of cancers, including all cancer, the most common cancer in Maryland (lung, breast, prostate, and colorectal), and cancers that may be related to environmental exposures (kidney, leukemia and lymphoma, thyroid, and brain & central nervous system).
46	Cancer	Breast & prostate cancer concerns (triple negative breast cancer)- Clover Hill area	DHMH	Breast and prostate cancer are among the types of cancers that are being looked at in the investigation. They are among the most commonly diagnosed cancers in all populations. Triple negative breast cancer is not reported separately from all other breast cancer during the 2000-2007 period.
47	Cancer	Why collating cancer data now?	FCHD, DHMH	The Maryland Cancer Registry is an ongoing registry since 1992, and the data are used for many different purposes. For example, data are used to look at the numbers and rates of cancer by type of cancer, race, ethnicity, age, gender, and geographic residence. In addition to all of its other responsibilities, the Registry provides data to the counties, which use the data to target cancer surveillance, screening, and prevention activities in conjunction with local health care providers and organizations. The review of state cancer data, to determine whether any particular area has more cancer than would be expected under normal circumstances, is a complicated task that requires additional resources beyond the other activities of the Registry and the health department. However, both the state and county health departments are committed to providing resources to this review of Registry data, because of community concerns.
48	Cancer	Why taking this long to determine if there's a cluster?		<i>This was answered in prior meetings and a typed response will follow.</i>

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49	Cancer	CDC expertise ever utilized?	ATSDR	Yes. The Agency for Toxic Substances and Disease Registry (ATSDR) is part of the Centers for Disease Control and Prevention (CDC). ATSDR is required to conduct a public health assessment (PHA) for every site proposed for listing on the NPL. On December 9, 2009, ATSDR released the Fort Detrick Area B Groundwater Public Health Assessment. The Fort Detrick Area B Groundwater PHA can be viewed at: <a href="http://www.atsdr.cdc.gov/HAC/pha/FtDetrickAreaBGroundwater/FortDetrickPHAFinal12-09-2009.pdf">http://www.atsdr.cdc.gov/HAC/pha/FtDetrickAreaBGroundwater/FortDetrickPHAFinal12-09-2009.pdf</a>
50	Cancer	Lives near Ft. Detrick- has soft tissue cancer and breast cancer.		See the response to question 59.
51	Cancer	Past employee of Ft. Detrick (building 1422)- tested operators, discovered most going deaf; knots in breast; tumor over left eye; white streaks in brain (mini strokes?). What do I do for my health concerns?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
52	Cancer	Who can I talk to?	FCHD	For questions about the cancer investigation, you can contact the Frederick County Health Department, at 301-600-7400. Questions about Fort Detrick work conditions or the environmental investigation should be directed to Fort Detrick. Employees who are concerned that their health may have been adversely affected by their work environment are encouraged to speak to their employer as it may be a Workers' Compensation program issue, personal health care provider, or the Maryland Occupational Safety and Health program.
53	Cancer	Occupational exposure from handling papers?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading -

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54	Cancer	Worked at TransIT- high rate of employees diagnosed or currently	FCHD	environment are encouraged to speak to their employer as it may be a Workers' Compensation program issue, personal health care provider, or the Maryland Occupational Safety and Health program. The question of where someone's cancer "comes from" is always complicated.
55	Cancer	Work at Amber Meadows- what actual developments are being included in the cancer cluster investigation?	FCHD	Amber Meadows is within the three census tracts included in the initial phase of the preliminary investigation and can be found on the Frederick County Health Department website ( <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> ) page about the Cancer Investigation Status Update or going directly to <a href="http://www.frederickcountymd.gov/documents/Health%20Department/Health%20Information%20and%20Resources/Map%20census%20tract%20study%20081210.PDF">http://www.frederickcountymd.gov/documents/Health%20Department/Health%20Information%20and%20Resources/Map%20census%20tract%20study%20081210.PDF</a> . The census tract involved in the initial phase of the preliminary investigation are 750501, 751200, and 750700.
56	Cancer	Need more information about the process and timeline, re: investigation?	DHMH	The Maryland Department of Health and Mental Hygiene is now looking at data provided by the Maryland Cancer Registry that includes all cancers diagnosed in people living in the 3 census tracts immediately surrounding Ft. Detrick between 2000 and 2007. Those cases represent all cancer cases, and are being compared with the number of cases that would have been expected if the people living in those areas had the same cancer rates (by age group) as people living in Frederick County as a whole, and as people living in Maryland as a whole. The preliminary results of this review should be available in October.
57	Cancer	How are people who moved out of the area and have/had cancer being counted in the investigation?	FCHD, DHMH	People who were living within what is approximately a 1-mile radius from the perimeter of Ft. Detrick Areas A & B whose cancers were diagnosed between 2000 and 2007 will be included in the initial preliminary investigation using the Maryland Cancer Registry data, even if they have moved out of the area after diagnosis (one exception could be if they were active duty military and not seen in the civilian health care system). People who moved and whose residence at the time of diagnosis is out of the three Census Tracts will not be included in the preliminary investigation. Depending upon the results of the preliminary investigation of the Maryland Cancer Registry data there may be a reconsideration of the source of the data in addition to the geographic area of concern, the types of cancers and the time period analyzed.

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58	Cancer	When do we move from collecting data to naming the problem and moving to solutions?	FCHD	The Maryland Department of Health and Mental Hygiene began its preliminary investigation using data that was already collected by the Maryland Cancer Registry. The cancer investigation is being conducted to answer questions and concerns that have been raised by Frederick County residents about cancer in the area, and will proceed independently of any ongoing issues related to environmental remediation at Fort Detrick. If any additional concerns are raised as a result of the investigation, they will be addressed by the Frederick County Health Department, working together with the appropriate state and federal agencies.
59	Cancer	My farm was Ft. Detrick- was taken from us. 12 members of my family have been diagnosed with cancer.	DHMH	The Frederick County Health Department and the Maryland Department of Health and Mental Hygiene are very concerned about the health of Frederick residents, and the preliminary cancer cluster investigation that is underway is one response to these concerns. The departments are committed to providing answers to the questions and concerns that have been raised, as completely as possible. While we know that there are many reasons why individuals develop cancer, we want to give as complete an answer as possible to questions about the role of the environment. It may still not be possible to answer every question, and individuals should still discuss their questions and concerns with their personal health care provider, especially if there appears to be a strong family history of cancer.
60	Cancer	ATSDR- what did their assessment look at/find?	ATSDR	The Fort Detrick Area B Groundwater PHA used data available from Area B site assessments and the concentrations of contaminants in off-site drinking water wells to determine whether people exposed to chemicals from Area B groundwater are likely to get sick from those exposures. ATSDR concluded that estimated exposure doses to the maximum measured TCE and PCE off-site concentrations via exposure to contaminated water around the Area B site are unlikely to produce any harmful health effects, including cancer.

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61	Cancer	Mr. White- family members diagnosed with cancer and over 500 people have responded to his survey. It was reported that over 20 men died who moved a vault and found bones (at Ft. Detrick?).	FCHD	<p>The vault question will be forwarded to Ft. Detrick for response.</p> <p>A preliminary analysis of data in the Maryland Cancer Registry is underway by the Maryland Department of Health and Mental Hygiene. It is important to remember that the certain cancers are not reportable to the Maryland Cancer Registry; namely, people with basal and squamous cell skin cancer are not included, and people whose residence was not in Maryland at the time of diagnosis are not included.</p>
62	Cancer	Rare leukemia (1982)- 4 members of one family died of this; since then 8 more have died of same leukemia; 3 other families affected with same and common denominator- all worked at Ft. Detrick (studied by John's Hopkins)	DHMH	<p>There was a previously published study of four people with Familial Erythroleukemia in the Johns Hopkins Medical Journal in 1982 that we were made aware of and have reviewed as a part of the preliminary investigation. The cancers in the article occurred before the investigation period. All leukemias with date of diagnosis between 2000-2007 will be included in the current investigation. Given the limitations of the Maryland Cancer Registry it is not possible to look specifically at this one type of rare leukemia unless the individuals affected come forward or their treating doctors come forward with information about the confirmed diagnosis and geographic exposure commonalities among the cases.</p>
63	Cancer	Lived on farm near Ft. Detrick- mom died of cancer- financial hardship to pay for tx. Many families near Shookstown Rd. have had cancers.	FCHD	<p>If cancer in the area is found to be above what would be expected, the next question would be to look at the types of cancer that are increased, and at what kinds of factors are known or suspected of being associated with increased risk of these cancer types. For persons who are currently are facing financial difficulties in paying for cancer treatment, they should contact the Frederick County Health Department's Chronic Disease Program to learn more about resources that might be available.</p>

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64	Cancer	Can the local hospital/facilities be asked for their cancer data? Ask Univ. of MD and Hopkins how many of who they treat for cancer are from this area?	DHMH	The Maryland Cancer Registry collects data from cases diagnosed in hospitals throughout the state and hospitals out of state who diagnose cancer in Maryland residents, so cases diagnosed in these hospitals should already be a part of the Registry and will be included in the investigation. Cases in the registry are counted by their residence at diagnosis, regardless of the hospital or physician who makes the diagnosis.
65	Cancer	When you do first [Maryland Cancer Registry analysis] data set will it be adjusted for age?	DHMH	The analysis of cancers from the Maryland Cancer Registry will be adjusted for age, because cancers of different types are more likely to occur in certain age groups than in others.
66	Cancer	Bowers Road (20 years)- Road workers on Shookstown Rd- concern that they are at risk?	FCHD, DHMH	Maryland Occupational Safety and Health program, in the Department of Labor, Licensing, and Regulation, is responsible for health and safety regulations in the workplace. Generally, employers have a responsibility to maintain a safe and healthy workplace. For example, workers involved in remediation of hazardous waste sites have strict regulations about personal protective equipment and work practices. If the investigation reveals any additional information about hazards, these will be immediately communicated to the appropriate agencies and employers. If employees have concerns about their working conditions they are encouraged to address those concerns through the means established by their employer and as permitted by law.
67	Cancer	Is someone being proactive in protecting workers from harm?	FCHD, DHMH	Maryland Occupational Safety and Health program, in the Department of Labor, Licensing, and Regulation, is responsible for health and safety regulations in the workplace. Generally, employers have a responsibility to maintain a safe and healthy workplace. For example, workers involved in remediation of hazardous waste sites have strict regulations about personal protective equipment and work practices. If the investigation reveals any additional information about hazards, these will be immediately communicated to the appropriate agencies and employers.

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68	Cancer	Rare leukemia and rare lymphoma- both in same family. They won't be in the [Maryland Cancer Registry] investigation.	DHMH	See the response to question 59 and 62.
69	Cancer	5 members in my family with cancer- lived/farmed near Ft. Detrick all my life.	FCHD, DHMH	See the response to question 59.
70	Cancer	Why not talk to high school class presidents, etc. from the past as a source of information for the investigation?	DHMH	The Maryland Cancer Registry contains data that is thoroughly reviewed, to ensure that the data about the cancer is accurate. This is a time-consuming process, but it means that the Registry data is the best data available for this first phase of the investigation. An investigation that involved interviews would also need to identify medical records, obtain the records, review and summarize the records in a consistent fashion, create a new data base, and take considerably more time, personnel, and resources than this first phase or preliminary investigation. While such a project could be done in this case, we do not believe it is the most efficient way of looking at existing data to start with.
71	Cancer	What if a significant level of cancer is found- what next?	DHMH	If cancer in the area is found to be above what would be expected based on Frederick County and Maryland cancer rates, the next question would be to look at the types of cancer that are increased, and at what kinds of factors are known or suspected of being associated with increased risk of these cancer types. This could provide clues as to what might be involved in contributing to an increase in cancer cases. Ultimately, if there are environmental conditions that are thought to be contributing to an increased risk of cancer, the health department will communicate that fact to the community and appropriate agencies and work to correct the problem. If other factors are thought to be involved, the Frederick County Health Department will work with the community to reduce cancer rates through its cancer prevention program and the work of the Frederick County Cancer Coalition.
72	Cancer	Why is Ft. Detrick not examining and reporting cancer among employees?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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73	Health	I know we are talking about cancer but what about effects of Agent Orange? My sister lived on Granada Circle off Kemp Lane in the 60's and 70's. She has neuropathy and does not have diabetes. Drs. told her uncommon--what are you doing about notifying people who may have been exposed to Agent Orange?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
74	Misc.	Person asked to be notified of next meetings.	FCHD	Notification provided during August 12 meeting.
75	Misc.	Just bought a home in Clover hill 2 1/2 years ago and I am wondering what the *##*# I'm gonna do if my house doesn't sell and will I be compensated if it does not.		Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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76	Misc.	Also want to know why I wasn't informed about this from the president of Clover hill, also my listing agent when I bought my house. I would have never bought in Frederick if I knew.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
77	Health	What about tracking/investigating other illnesses other than cancer?	FCHD	Cancer is the condition that has been most often mentioned in connection with community concerns. It is also a condition that must be reported to the state, so there is a Cancer Registry that can be used to provide valid, reliable data for the investigation. Other conditions would require a great deal more work to investigate because that information is not readily available, cancer data was deemed the most appropriate way of conducting the investigation.
78	Misc.	What is Frederick government willing to do to rebuild trust in the community? Specifically with Ft. Detrick? Mistrust stemming from hearing about these problems from sources other than the government.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
79	Misc.	What is Frederick doing/will do to protect property values around Ft. Detrick?		

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80	Misc.	Isn't there a conflict of interest to have the National Cancer Institute at Ft. Detrick?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
81	Cancer	Concern that there will be too many people missed in cancer data collection. What about people who contracted the cancer before 1992?	DHMH	The initial or preliminary investigation by the Maryland Department of Health and Mental Hygiene is starting with 3 census tracts that immediately surround Fort Detrick, Areas A & B. Data in the Maryland Cancer Registry contains <u>census tract</u> identification only for cases beginning in 2000. The reason to use census tracts is because census tracts are smaller areas than ZIP code areas and we know the population of the census tracts (the population is counted in each decennial census). Knowing the population at a given time allows us to compare the actual number of cases of cancer in the census tracts with the number expected, based on Frederick County and Maryland cancer rates. If no increase is seen in this first analysis, additional cases could be added from 1992-1999, but these do not have census tract data, and the analysis will require considerably more data processing or a much bigger geographic area (zip codes). Cases that occurred before 1992 are not in the Maryland Cancer Registry. An investigation of cases before 1992 would require an entirely different (and more difficult) approach from the that of the preliminary analysis utilizing the Maryland Cancer Registry.
82	Cancer	Concern that people who have moved away from Frederick will not be included in the Maryland Cancer Registry.	FCHD	See answer to Question 57.
83	Health	Is there a subject matter expert for electromagnetic field related diseases/disorders/concerns? [related to PATH proposal]	DHMH	There are people who could be made available who are knowledgeable about electromagnetic fields and their potential health effects. At this point, the investigation is concerned with cancer cases and will look at potential associated risk factors once there is more data available on the types and numbers of different cancers.

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84	Cancer	Besides the Ft. Detrick area, what other areas of the country have cancer clusters?	FCHD, ATSDR	Many different cancer cluster investigations have occurred across the country. More about these investigations can be viewed at <a href="http://www.cdc.gov/nceh/clusters/">http://www.cdc.gov/nceh/clusters/</a> .
85	Land	Whatever was the outcome of the "bubble" that enclosed that area of contaminants off Kemp Road? The 2 million dollar project which became 4 million dollars.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
86	Land	What was discovered that prompted the "bubble" tent on Area B and what was done with it?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
87	Water	Have there been any hydrology studies on the flow of water and what areas might be affected?	EPA	The Army has in the past conducted dye tests and installed monitoring wells within the Area B property boundaries and reported the findings in several reports. However, EPA and MDE have raised concerns about some of these studies. Additionally, questions still exist regarding the nature of the karst features within the bedrock and the degree in which groundwater flow is affected by the orientation and connection of the voids and conduits within the bedrock and the flow direction within the deeper portions of the aquifer underlying Area B. New dye studies, installation of wells and sampling and analysis of new and existing wells will be part of the new upcoming RI activities.
88	Misc.	The newspaper mentioned a "Site 2" in addition to Site B. What is it?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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89	Cancer	Was the CDC ever contacted to investigate whether there was a "cluster" of cancers and what could be the cause?	ATSDR	Yes, the Maryland Department of Health and Mental Hygiene (DHMH) and the Frederick County Health Department have requested CDC/ATSDR's assistance answering health and cancer questions relating to the Fort Detrick Area B site in 2010. State and county health departments are a community's primary support for questions regarding potential cancer clusters. However, if a state health department identifies a concern about a cancer cluster and requests federal assistance, CDC/ATSDR may work with the state to provide additional technical support. CDC, ATSDR, Maryland Department of Health and Mental Hygiene and the Frederick County Health Department have not located any records or information regarding any prior cancer cluster investigations by CDC or DHMH in Frederick County.
90	Water	Well testing for dioxin does not make sense as it is more of a particulate and should be sampled in soil.	EPA	Dioxin is very stable in the environment, and tends to remain in soil. Therefore, some soil samples from Area B and its vicinity will be collected and tested for dioxin. However, in some geologic environments where the aquifer is relatively porous or fractured and flow rates are high, such as the karst aquifer underlying parts of Area B, the particles and the hydrophobic contaminant (e.g. dioxin) sorbed to these particle may move with the groundwater. Therefore, in some areas and in some wells, water samples may be collected for dioxin analyses.
91	Water	What is the number of wells around Ft. Detrick?	MDE	Within two miles of the boundaries of Ft. Detrick, there are 15 wells that are used by public water systems (7 community water systems, and 8 transient noncommunity water systems). The statewide well data base indicates that there are approximately 1967 individual wells located within this 2-mile area. The locational information for the individual wells has not been verified.
92	Misc.	I want a promise from the Army to not do testing outside again.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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93	Water	The surrounding area needs to be on public water.	City of Frederick, MDE	If the Maryland Department of the Environment determines that there are area-wide contaminations that could impact individual private wells, an investigation in collaboration with the local County Health Department will be made. Depending on the significance of the contamination and number of impacted wells, corrective actions will be recommended. If wells are contaminated at a level that exceeds federal or State drinking water standards, solutions under consideration will include the provision of public water. There is also the option for the responsible party (e.g. Ft. Detrick) to request that the City connect those properties.
94	Cancer	John Bee with the KRF listed 100 cancers reported: renal, brain, prostate, leukemia, lymphoma, thyroid and breast. Question asked by audience and replied by John Bee :What is trend in cancer location? [from KRF data] Answer from John Bee: Around Area B		
95	Water	DNAPL found and doesn't move without groundwater.	EPA	DNAPLs (Dense, Non-Aqueous Phase Liquids), are a class of chemicals sometimes encountered at hazardous waste sites. DNAPLs have low solubilities in water, and have densities greater than that of water, and thus can exist in the subsurface as Under certain conditions DNAPLs have the potential to migrate as a separate phase liquid above the water table and/or below the water table in both unconsolidated materials and fractured bedrock. Thus, if DNAPLs are present in the groundwater, they may not move in the same direction as groundwater flow.

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96	Land	Sink holes and their effect on ability to predict water flow?	MDE	<p>“Sink holes” are the surface expression of solution cavities that develop beneath the earth’s surface. Typically they are associated with formations composed of limestone and dolomite. Groundwater moving through these formations dissolves the calcium carbonate matrix of the limestone or dolomite, developing solution voids. As the dissolution process continues the voids enlarge and may breach the surface forming a ‘sink hole.’ These features are known as Karst topography and typically indicate that a complex groundwater flow regime maybe present. The solution cavities or voids in the limestone/dolomite act as primary flow paths for groundwater and may have been influenced by original porosity and chemistry of the bed rock, secondary fracture patterns, or historic topographic orientation of the formation.</p>
97	Land	What else was done there, what exotic pesticides and herbicides?	FD	<p>Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.</p>
98	Air	Simulant release tower. Can you explain this?	FD	<p>Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.</p>
99	Water	Limestone geology without fast groundwater flow-- that's why you get a big plume.	MDE	<p>Whether or not a contaminant plume exists depends on multiple factors, not just the hydraulic characteristics of an aquifer. The means and manner and location at which a contaminant is added to the environment as well as the water solubility and affinity of a contaminant to aquifer materials all play a role in whether or not a contaminant plume is present in the groundwater. A limestone that has developed Karst features can potentially transport significant volumes of water very quickly and move contaminants significant distances over short periods of time. Karst features can also store large volumes of water, resulting in contaminants having long-term presence in the groundwater. It is also possible that the pulse nature of much of this groundwater flow may not yield a long and continuous plume of contamination as might be found in a formation where groundwater flow is controlled by primary porosity and permeability (e.g. the unconsolidated deposits in Maryland’s coastal plain).</p>

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100	Water	<p>A model suggesting potential exposures - ground water and surface water (carrying solvents), dioxins in air from spraying and burning (3 incinerators--present one, off base elsewhere, and at WWTP), and ingestion biomagnified (dioxin) in milk, and biowarfare testing. Would like EPA &amp; ATSDR to evaluate these exposure routes.</p>	EPA, ATSDR	<p>As part of ATSDR's health assessment process, ATSDR identifies available environmental data relevant for public health, evaluates the quality of these data, and conducts an exposure pathway evaluation. ATSDR then evaluates all relevant completed and/or potential exposure pathways. ATSDR will evaluate the magnitude, frequency, and duration of exposures based on available information and environmental data. ATSDR followed this health assessment process in the development of the Fort Detrick Area B Groundwater Public Health Assessment, and anticipates doing so with future environmental data packages provided to us by the agencies or other interested parties.</p> <p>Modeling could be a valuable tool in the absence of (or in conjunction with) empirical data. To the extent possible, EPA prefers (and will collect) empirical data to determine the presence of contamination at the site. If necessary, modeling will also be performed, but is not as compelling as real data.</p>
101	Land	<p>Incomplete burnings resulting in dioxin, samples taken near Waverley School, cornfield and near Kristen Renee's house and at Krantz farm--all levels of concern.</p>	MDE	<p>There are 7 principal dioxin compounds, 10 furan compounds, and 12 polychlorinated biphenyl (PCB) compounds which act similarly and may pose potential health risks. The compounds in this group (dioxins, furans, and PCBs) have different levels of toxicity, so a particular level of one compound does not necessarily pose the same risk as an equal level of another compound in the group. Dioxins are widespread environmental contaminants that tend to be present in soil at background levels. The background level of dioxins and related compounds in Frederick County has not been determined.</p>

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102	Land	What is a "level of concern" for dioxins?	EPA	The answer to this question is multi-faceted. U.S. EPA's current residential clean-up standard for 2,3,7,8-TCDD <sub>eq</sub> equivalents is 1000 parts per trillion. However, research conducted since this standard was developed implies that this level may not be sufficiently protective of sensitive subpopulations under conditions of chronic exposure. Consequently, U.S. EPA is actively considering lowering the screening level for 2,3,7,8-TCDD to 72 parts per trillion; this value is referred to as an interim Preliminary Remediation Goal, and would protect residents against both cancer and non-cancer health effects, given the current toxicity criteria for 2,3,7,8-TCDD. Note that background levels of 2,3,7,8-TCDD in rural areas of the U.S. range up to 11 parts per trillion.
103	Cancer	Does it make sense to do any comparison to cancers/disease rates around Frederick County landfill?	DHMH	When comparing the number and types of cancer cases in Frederick, the goal is to find a population that is somewhat similar to the population in Frederick in most aspects EXCEPT regarding potential exposures. Because we know the cancer rates by age group for both Maryland and Frederick County, these were chosen as the best comparison groups. We could not use the population around the landfill, because it is too small to use statistically.
104	Misc.	I would find it helpful to have dates related to when releases/exposures have happened. Too many claims without references.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
105	Air	When was Agent Orange released? When was burning? When did the cows and bull die? How are all the claims related in time? (Time Relations)	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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106	Health	Can medical information be pulled from Medical Reports from DOD, NCI, NCI-Contractors, etc?	DHMH	We do not have access to medical reports from employers in the area. If the employees live in the area, and were diagnosed during the investigation period, their records are supposed to be in the Maryland Cancer Registry if they were diagnosed with cancer since the reporting requirement went into effect.
107	Misc.	Can meeting notices be put on City's Nixle notifications?	FCHD	<i>will contact City of Frederick</i>
108	Misc.	Can you put handout online for us to print ourselves? Ask folks to print another copy.	FCHD	Yes
109	Air	August 3 acrid odor in morning at Rosemont gate on Ft. Detrick. Later in the day it was observed that there were orange cones around a broken pipe. What could explain it?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
110	Water	What is the source of the City of Frederick's water supply and is it possibly under the influence of contaminated water from Ft. Detrick?	City of Frederick	There are two types of water sources. They are ground water and surface water. Ground water of course is from a well and surface water is water from lakes (Lake Linganore), creeks (Linganore Creek) and reservoirs (Fishing Creek). We have both supplies available, however our wells (wells 3,7,9 located on Schifferstadt Blvd) were only in production for 4 months during the 2002 drought. Our water sources are not affected nor under the influence by the contaminated water.
111	Water	Has the City of Frederick tested its water for the contaminants of concern?	City of Frederick	The City of Frederick regularly tests its water supply for regulated and unregulated contaminants. A full report can be found on the City's website - <a href="http://www.cityoffrederick.com/cms/files/dpw/annual-drinking-water-quality-report.pdf">http://www.cityoffrederick.com/cms/files/dpw/annual-drinking-water-quality-report.pdf</a> .

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112	Misc.	Why were Frederick County Health Department distributing literature from the Kristen Renee Foundation at the August 12 meeting?	FCHD	Frederick County Health Department staff were NOT distributing literature from the KRF or other organization or individuals at the August 12 meeting. FCHD staff may have been seated at the end of the row and were asked to pass information down to others seated in the row as is a common courtesy and practice when people are seated. Two FCHD staff were stationed at the main entrance to greet persons arriving and to offer paper for those wishing to submit questions on paper. There were persons from the KRF standing near to them, but the FCHD staff were not engaged in the distribution of the KRF literature.
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113	Cancer	A colleague told me that there is/was poor data integrity associated with the Md. Cancer Registry several years ago (“around 2000”).	DHMH	<p>The Maryland Cancer Registry had data problems for diagnosis year 2002. This led to delays in releasing these data. 2002 data were released in the data published in the April 2008 Amendment to the 2006 report (<a href="http://fha.maryland.gov/cancer/surv_data-reports.cfm">http://fha.maryland.gov/cancer/surv_data-reports.cfm</a>)</p> <p>From the Amendment to the 2006 report: I. Introduction to the 2006 Cancer Report Amendment</p> <p>This Amendment serves as a stand-alone addition to the Cigarette Restitution Fund (CRF) Program Cancer Report dated September 2006. This Amendment:</p> <ul style="list-style-type: none"> <li>• provides the 2002 cancer incidence data that was missing from the original report; and</li> <li>• revises the original cancer incidence data for 2002 published in that report.</li> </ul> <p>DHMH Center for Cancer Surveillance and Control identified problems with cancer incidence data for 2002 primarily affecting melanoma and cervical cancers (as noted on pages 1, 2, and 165 of the 2006 CRF Program Cancer Report, September 2006); therefore, we were not able to publish the 2002 data for these cancers at the time of the original report.</p> <p>“Remediation” was undertaken to correct the problems with the cancer incidence data for 2002 and that remediation affected cancer data for each site to some extent. As a result, the originally published data for 2002 incidence (counts and rates) for lung, colorectal, prostate, breast, and oral cancers also changed. This 2006 Cancer Report Amendment provides the data omitted from the 2006 Cancer Report and replaces existing tables in the report with updated data. In this Amendment, we are providing the incidence data tables for 2002 and 1998-2002 (combined years) along with the introductory page for each cancer. Data points that are missing from the graphs and tables in the original report will</p>
201	Misc	Why does it take so long for getting answers?		<p>Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.</p>

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202	Water	How much would risk be reduced if they were on city water?	MDE	<p><i>The data to perform a quantifiable assessment of 'risk reduction' on individual residential wells are not available. It can be stated that public water systems such as the City of Frederick are routinely tested for over 100 regulated and unregulated contaminants and required to provide water that does not exceed maximum contaminant levels established by the EPA and adopted by the State of Maryland under the Safe Drinking Water Act. Unless a private water supply is being regularly tested for all potential drinking water contaminants and found to be within standards, there is more assurance that public water systems provide water that meets standards than private well water.</i></p> <p><i>Please refer to the Consumer Confidence and Source Water Assessment Reports for the City of Frederick for more specific information:</i></p> <p><i><a href="http://www.cityoffrederick.com/cms/files/dpw/annual-drinking-water-quality-report.pdf">http://www.cityoffrederick.com/cms/files/dpw/annual-drinking-water-quality-report.pdf</a></i></p> <p><i><a href="http://www.mde.state.md.us/assets/document/watersupply/SWAPS/Frederick/City%20of%20Frederick.pdf">www.mde.state.md.us/assets/document/watersupply/SWAPS/Frederick/City%20of%20Frederick.pdf</a></i></p>
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203	Water	<p>What is the concentration of vinyl chloride--did you find it? And the significance if you did find it?</p>	FD; MDE	<p>Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions. Vinyl chloride (VC) is a second generation breakdown product of trichloroethylene (TCE) {TCE-Dichloroethene (1,2-DCE)-VC} and a third generation breakdown product of tetrachloroethylene (PCE) {PCE-TCE-1,2-DCE-VC}. Both TCE and PCE are principal contaminants found in groundwater at Area B.</p> <p>VC has been found in the source area near the B-11 pit. In 2007, 21 Area B monitoring wells were sampled with only 1 detection of VC (9.6 ppm, in BMW 56D) near the B-11 pit area. There were no off-site detections of VC. Consistent levels of vinyl chloride (VC) throughout the contaminant plume would indicate that the known contaminants (i.e. TCE, PCE) may be naturally degrading through the process of dehalogenation to a benign endpoint (i.e. ethane) through biologic and natural processes. Certain anaerobic bacteria, principally Dehalococcoide ethenogenes, have been shown to effectively accomplish this conversion. The optimum pH range for D. ethenogenes has been reported in scientific literature as neutral to slightly alkaline, i.e., between 7 &amp; 7.5. During the 2007 sampling event, the average pH reported was 7.56 or slightly beyond the optimum pH range. Also, with the exception of the anaerobic pit areas in Area B, the aquifer is oxygenated (i.e., aerobic). For this reason, significant D. ethenogenes activity is unlikely to be detected beyond the pit areas.</p>
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204	Water	Unusually high snowfalls, does this impact the level of ground water? And how does it affect city water?	MDE	<p><i>Fort Detrick and the City of Frederick are located in the Piedmont area of the state. High levels of snow are an excellent source of groundwater recharge. The attached link to hydrographs of two wells in Frederick County shows that water levels early this spring in both wells were higher than normal, in part due to the benefit of slowly melting snow recharging the groundwater system. The hydrographs also show that the water levels have since dropped. In one well, FR Bd 96, located at Cunningham Falls State Park, the water levels are now below normal for this time of year. Water levels in the second well, FR Df 35, located near Lake Linganore have since dropped to the lower end of the normal range for this time of year. <a href="http://md.water.usgs.gov/groundwater/web_wells/current/water_table/counties/frederick/">http://md.water.usgs.gov/groundwater/web_wells/current/water_table/counties/frederick/</a> The City of Frederick obtains water through treatment plants operated by the City from three sources; the Monocacy River, Linganore Creek, and Fishing Creek reservoir. The City also has an agreement with Frederick County to supply them water from the Potomac River. Snowfall is also important source of water to recharge of reservoirs, rivers, and streams because they benefit from the higher groundwater levels that are located in the watershed. Both Fishing Creek reservoir and Lake Linganore reservoirs benefited from the increased runoff from the melting snow as they are able to store the higher spring flows for periods of lower flow.</i></p>
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205	Cancer	Of the 7 wells contaminated with TCE, are there any cancer effects from TCE?	ATSDR	<p><i>ATSDR's PHA estimated the TCE and PCE exposure doses to residents of those houses using the maximum measured concentrations of the chemicals in 1992 (when potable use of the wells ceased). Evaluation of these contaminants and estimated ingestion doses of TCE and PCE for children and adults lead to the following conclusions:</i></p> <p><i>a) "Harmful effects are unlikely for users of the contaminated private wells based on maximum measured concentrations of PCE and TCE (cancer and non-cancer health effects).</i></p> <p><i>b) Residences with contaminated wells are currently being provided with alternate water. Current exposure to VOCs at these locations is limited to incidental use of the wells for irrigation or other outside uses. These exposures are unlikely to result in any harmful health effects.</i></p>
205 cont'd			ATSDR	<p><i>c) The available information on the historic use and release of VOCs at the Area B site and patterns of groundwater flow is not adequate to determine how long (prior to 1992) the residential wells were contaminated.</i></p> <p><i>d) The available information on the historic use and release of VOCs at the Area B site and patterns of groundwater flow is not adequate to determine how long (prior to 1992) the residential wells were contaminated.</i></p> <p><i>e) The current distribution of groundwater VOCs suggests that concentrations in residential wells were not higher in the past.</i></p> <p><i>f) Based on the above findings, past, current and future exposures to VOCs via contaminated groundwater are not expected to cause adverse health effects. This determination means that exposures to site-related contaminants have occurred, or may be occurring, but at levels unlikely to create any harmful health effects. "</i></p>
206	Misc	Which committee is responsible for congressional oversight?		
207	Water	Stream--can it be located on the map [for public to see]?		

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208	Water	Final remedial investigation report-- when will it start? Will it be public?		Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
209		7:35 see John Bee's comments		
210	Cancer	What did ATSDR report say?	ATSDR	Per the requirements of the Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA or Superfund), ATSDR's completed a public health assessment (PHA) on the portion of the Fort Detrick proposed to EPA's National Priority List for long term cleanup. ATSDR's report on the Fort Detrick Area B Groundwater evaluated community exposures to the maximum measured TCE and PCE found in private wells around the Area B site. ATSDR concluded that these exposures were unlikely to produce any harmful health effects, including cancer.
211	Misc	Who are stakeholders, technical assistance?		
212	Water	Contaminated wells, people put on water-- what was it based on?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
213	Misc	Is CDC's work independent?	ATSDR	ATSDR is mandated by Congress to assess the presence and nature of health hazards at specific Superfund sites, to help prevent or reduce further exposure and the illnesses that result from such exposures, and to expand the knowledge base about health effects from exposure to hazardous substances. ATSDR's work and evaluation of environmental data is independent from the work performed by other State and Federal agencies such as the EPA and the Maryland Department of Health and Mental Hygiene. However, ATSDR does provide technical assistance to these and other agencies as requested.

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214	Land	If exposure was in 70s, do you expect to find much dioxin now?		
215	Misc	Is there any way to interpret by interviewing employees of Detrick what may have existed?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
216	Land	Only water was mentioned--will soil and air also be evaluated?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
217	Water	Will testing continue around area near the fence - all areas including Clover Hill? Houses there did not pass at the time.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
218		Where to look for dioxins--KRF knows where.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
219	Water	How can people get results of well testing done by Ft. Detrick?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
220	Air	Exposure in 50-80s--should attics of old buildings be sampled?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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221	Cancer	If you sample tissues of elderly people, would that show dioxins?	ATSDR	Yes, low levels of dioxins can be found in the environment and the general population. Dioxins are a group of chemicals that are produced by a number of activities such as the burning of waste and the bleaching processes used in pulp and paper mills. The general population is exposed to low levels of dioxins primarily through ingestion of high-fat foods such as dairy products, eggs, and animal fats, and some fish and wildlife. Dioxin-like chemicals are measurable in U.S. meats and poultry as a result of the accumulation of these substances in the food chain.
222	Misc	Is there a plan to find out from prior workers what was done?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
223	Cancer	Will new people moving into Frederick make the cancer cases look smaller?	FCHD	The three Census Tract area is compared to Frederick as a whole and Maryland as a whole, and, using census data from 1990 and 2000, includes the increase in population in all three areas over time and therefore the rate calculation is adjusted for an increase in population.
224	Land	When you [EPA] go out to test, do you call Detrick--does Detrick tell you [EPA] where to sample?		
225	Land	Does EPA do the actual testing or does Detrick? How do you know they are abiding by the rules?		
226	Land	What type of community involvement will there be when sampling the sites?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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227	Cancer	Dioxins--takes 20 years to develop cancer, many old timers moved in the year 2000.	FCHD	When cancer is diagnosed in the US, each case is "registered" by the residence at diagnosis, not by any prior addresses.
228	Land	Can John Bee be there during sampling because people trust what he says?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
229	Land	As a resident, how economical is it to have her own land tested for dioxins?		
230	Land	Digging was done and dirt was taken out and sent to Texas--can they test that contaminated dirt?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
231	Land	How long does this soil remain toxic (dioxins)?		
232	Misc	Who is in charge of communication? Discuss this at next meeting.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
233	Cancer	If exposed to dioxins or Agent Orange, is it likely it would pass to your offspring?	ATSDR	<i>This was discussed during the September 4 meeting. Response to be typed here later.</i>

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234	Cancer	1980--was there a cancer cluster investigation? Does the health department know of any studies?	FCHD	See answer to Question 89.
235	Land	Why can't there be a video camera when they are doing testing?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
236	Misc	Ft. Detrick, why don't you do testing (Agent Orange) inside, etc. instead of around houses?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
237	Cancer	Army released Agent Orange over neighborhood, polluted wells, dug trenches, exposing community to carcinogens, will Army respond to public? If you developed cancers, list of cancers VA listed, would they apologize and offer compensation?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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238	Cancer	Son has Crohn's, some say it could be from Agent Orange. Husband died.	FCHD	See answer to Question 77.
239	Cancer	Cancers, other diseases, will these others be investigated?	FCHD	See answer to Question 77.
240	Misc	If people have questions, bring to RAB meeting at Detrick.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
241	Misc	What is RAB?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
242	Misc	How do we elect whom we want to be in charge as a community--Detrick is questionable?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
243	Cancer	Looking at clusters--2007 info--do you know how long they lived in Clover Hill (within geographic area being investigated)?	DHMH	Although the Maryland Cancer Registry records contain address at the time of diagnosis, they do not indicate how long someone has lived at a particular address. This is one of the potential limitations of the investigation. See also answer to Question 227.

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244	Cancer	Do you want information from her neighborhood about who had cancer even if not [in the geographic area currently being examined] in the cluster investigation?	FCHD, DHMH	The Frederick County Health Department would be interested in hearing from people who may not necessarily be living in the 3 census tracts in the initial or preliminary phase of the investigation but who are concerned about cancer. This information may be useful to the investigation.
245	Land	Dirt--levels that Detrick had--can't we get record of the levels?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
246	Land	B11 completion report--results of soil analysis?	FD	See separate link under Resources on the web page and series of Fact Sheets to by Fort Detrick addressing the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
247	Misc	3/4 of neighbors have cancer--why didn't Ft. Detrick invite them to get information about Area B?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
248	Misc	Why was gate [entrance to Area B] closed today?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
249	Land	What's happening to plants and animals because of all this?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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250	Misc	What happened with Camp LeJune?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
251	Water	Wells--contamination way down deep?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
252	Water	How long for Detrick to give answer to homeowners from when they get the results? [How long each step in process from time homeowner makes request for sampling?]	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
253	Land	Woodland area on Krantz farm--sample there.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
254	Water	Area to sample is roof cistern--deposits should be in there and it should be tested. That used to be source of drinking water.	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
255	Air	When and where was simulant testing occurring and is it still being done?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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256	Land	Who tested the material in vials that was dug up and determined to be biologic material? Fort Detrick or an independent outside laboratory?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
257	Water	How can one access residential well test results performed in the past?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
258	Water	Groundwater flow- Is it expected to be different now than in the 70s?		<p><i>The question of groundwater flow can refer to both direction and quantity. As for direction, it would only be expected to be different in areas affected by changes in use since the 1970s. Water Management Administration is not aware of maps of ground water flow direction for the Fort Detrick area. Flow direction that is inferred only from differences in water levels from multiple wells can be misleading if the direction is assumed to be at right angles to water level contours. Ground water flow, even in karst geology such as is present on the Fort, still moves from higher ground water elevations to lower ground water elevations, but the path taken is greatly influenced by the extent of conduit flow. In the type of carbonate rock terrain of the Frederick Valley, ground water flow direction is best determined by comprehensive ground water tracing studies. In addition, the sampling and mapping of contamination levels will provide valuable insight into the direction of ground water flow in the area of concern. A very generalized map of the potentiometric surface for Frederick County was published by the Maryland Geological Survey (Plate 2, Bulletin 33, 1987) which indicates that higher potentiometric surfaces are to the west of Fort Detrick and lower altitudes toward the Monocacy River, suggesting an eastward component of ground water flow direction. However, the orientation of bedding planes and secondary fracture openings and conduits will significantly affect the generalized flow direction at any location.</i></p>

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258 cont 'd				<p><i>As for flow quantity, an increase in impervious surfaces from the 70s may reduce ground water recharge and thus reduce the quantity of ground water movement through the aquifer system. It has also been documented, however, that certain areas of the Frederick Valley are susceptible to sinkhole occurrence. The development of a sinkhole in an area receiving storm water runoff from impervious surfaces will result in an increase in ground water flow (recharge) and negatively affect ground water quality. The following link is to a fact sheet developed by the Maryland Geological Survey on sinkholes in Maryland which may be of interest.</i></p> <p><a href="http://www.mgs.md.gov/esic/fs/fs11.html">http://www.mgs.md.gov/esic/fs/fs11.html</a></p>
259	Land	Was VX gas tested by Fort Detrick or any entities operating on Ft. Detrick's property?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
260	Air	What was sprayed near Clover hill that resulted in the death of animals that were staked out?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
261	Water	Why was Krantz property supplied bottled water for over 30 years?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.
262	Cancer	Can anthrax cause cancer?	DHMH	Anthrax is not known to be associated with any cancer.
263	Air	Was perimeter air sampling performed in area of bubble during the time that Mr. Krantz farmed nearby?	FD	Fort Detrick has prepared a series of Fact Sheets to address the questions raised by the public. Those Fact Sheets can be found at <a href="http://www.FrederickCountyMD.gov/CancerInvestigation">www.FrederickCountyMD.gov/CancerInvestigation</a> under the section heading - Community Comments and Questions.

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264	Misc	<p>Were human remains found when excavating prior to building the National Cancer Institute? If so, what was the cause of death and circumstances resulting in the burial at that location? Were tests done to determine if any toxic exposures?</p>		
265	Health	<p>Can I find out what my Dad died from? Got sick from something while working at Ft. Detrick. His medical records from Ft. Detrick were blanked out.</p>		
266	Health	<p>What tests are available for measuring dioxins in human blood?</p>	ATSDR	<p>Two types of tests are available for determining dioxin levels in blood samples. Bioassay tests will provide an estimate of the total TEQ concentration, but cannot provide a measure of individual dioxin congeners in a sample. These tests use genetically modified mammal cells that respond when exposed to the dioxin-like chemicals in a blood sample. Bioassays are generally used only for screening because the test can also respond to other chemicals that may be in the sample. An advantage of the screening level bioassay is a far lower cost than other test methods. High-resolution gas chromatography/mass spectroscopy (HR-GC/MS) analysis is the preferred test to measure individual congeners as well as the total dioxin TEQ concentration. The US Environmental Protection Agency has developed Method 8290 to guide laboratories in performing this analysis. Lipid (blood fat) analysis should also be done on the blood sample so that the results of the test can be given as units of dioxin TEQ per unit of blood lipid. While the HR-GC/MS test is more specific, it is also more costly than the screening bioassay test.</p>

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267	Health	How much would a screening test[for dioxin] cost?	ATSDR	A screening level bioassay will likely cost from \$350 to \$400. HR-GC/MS may cost from \$1,200 to \$1,500. These tests are not likely to be covered by medical insurance.
268	Health	Is there a test for dioxin [exposure]?	ATSDR	<p>There are very few laboratories that can reliably measure dioxins in a blood sample. The information provided below is not meant as an endorsement or an assurance of the quality of service provided by any laboratory. Individuals who want their blood sampled, must make their own contacts and arrangements through their personal physician. MDCH cannot collect, prepare or ship blood samples.</p> <p>Tests to measure the level of dioxins and similar chemicals in a person's blood are not readily available to the public. These tests are very costly and it is not likely that they will be paid for by medical insurance. In addition, it is very difficult to interpret the results of such tests. For these reasons, MDCH does not recommend that individuals have their blood tested for dioxins. However, this fact sheet has been developed to answer questions and to assist individuals and their physicians in obtaining dioxin blood tests should they pursue testing. Fact sheet can be found at --  <a href="http://www.michigan.gov/documents/Blood_Testing_for_Dioxins_119419_7.pdf">http://www.michigan.gov/documents/Blood_Testing_for_Dioxins_119419_7.pdf</a>  . Apparently Alta can do it for \$1000-1200/sample. Alta - Analytical Perspectives 2714 Exchange Drive Wilmington, NC 28405  Phone: 910-794-1613 .</p>
269	Health	How much blood is needed for dioxin analysis?	ATSDR	<p>About 80 milliliters of blood (eight medium-sized tubes) are needed to perform both the HR-GC/MS test for dioxins and the lipid analysis. The US Centers for Disease Control (CDC) has developed a procedure for collecting, preparing, and shipping blood samples for dioxin analysis. People or their doctors may obtain the procedure from the MDCH web site (<a href="http://www.michigan.gov/mdch-toxics">http://www.michigan.gov/mdch-toxics</a>) or from the laboratory performing the blood analysis.</p>

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270	Health	How can I tell if my dioxin level is high [compared to background expectations]?	ATSDR	<p>The CDC has estimated the dioxin TEQ level in people in the United States who have been exposed to background levels of dioxins. These estimates are based on age, because dioxin body burdens tend to increase, as a person gets older. Please contact the MDCH for assistance in interpreting the results of dioxin blood tests.</p>
271	Misc	What are dioxins?	ATSDR	<p>Dioxins and dioxin-like compounds are a group of chlorinated chemicals with similar structures and chemical properties. The group includes chlorinated dioxins, furans, and some polychlorinated biphenyls (PCBs) and is often referred to collectively as simply "dioxins." Each chemical in the group is called a dioxin congener. When found in the environment or in human blood samples, dioxins are usually a mixture of several of these congeners. While there are 210 dioxin and furan congeners and 209 PCB congeners, a much smaller group of 7 dioxins, 10 furans, and 12 PCBs are of most concern for human health.</p>
272	Misc	Are all dioxins the same?	ATSDR	<p>Although all dioxin congeners are thought to act in the same way, they are not all equally toxic. The most toxic congener in the dioxin group is 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Scientists have developed toxic equivalency factors (TEF) to compare the relative toxicity of other congeners to that of TCDD. TCDD is assigned a TEF value of "1" and the remaining 16 dioxins/furans and 12 PCBs of concern are assigned a TEF that estimates its toxicity compared to TCDD. For example, a TEF of 0.5 (one-half) is assigned to a congener that is half as toxic as TCDD.</p>

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273	Misc	What is a [dioxin] TEQ?	ATSDR	<p>The dioxin toxic equivalent (TEQ) is a way to express a concentration of a mixture of dioxins based on its estimated toxicity compared to TCDD. The levels of dioxin congeners measured in environmental or biological samples are multiplied by their TEF to produce a TCDD toxic equivalent or TEQ concentration. The resulting TEQs for all dioxin congeners measured in a sample are then added together to determine the total dioxin TEQ concentration for that sample.</p>
274	Health	How likely is it that I have dioxin in my body?	ATSDR	<p>All people in the United States are believed to have some level of dioxins in their body fat and blood. Dioxins are found throughout the environment and most people are exposed to low background levels in air, soil, or food. The level in a person's body is called the dioxin body burden. People who work in occupations that expose them to dioxins or who live in areas where environmental levels of dioxins are higher may have higher dioxin body burdens. People may also have higher dioxin body burdens if they eat fish, meat, or dairy products that contain higher levels of dioxins.</p>
275	Health	Will dioxin in my body make me sick?	ATSDR	<p>A safe level of dioxin body burden is not known at this time. In general, a lower level of exposure to these contaminants will result in a lower body burden and a lower likelihood of health effects. There are steps that you can take to reduce your exposure.</p>