Health Consultation

FINLAND RADAR STATION

LOOKOUT MOUNTAIN VILLAGE, LAKE COUNTY, MINNESOTA

JULY 29, 2004

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

Health Consultation: A Note of Explanation

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

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

You May Contact ATSDR TOLL FREE at
1-888-42ATSDR
or
Visit our Home Page at: http://www.atsdr.cdc.gov

HEALTH CONSULTATION

FINLAND RADAR STATION

LOOKOUT MOUNTAIN VILLAGE, LAKE COUNTY, MINNESOTA

Prepared by:

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

Foreword

This document summarizes health concerns associated with the Finland Radar Base, also known as Lookout Mountain Village in Lake County, Minnesota. This facility is owned and operated by Finlandia Development Corporation/Finlandia LLC. This document is based on a formal site evaluation prepared by the Minnesota Department of Health (MDH). A number of steps are necessary to do such an evaluation:

- Evaluating exposure: MDH scientists begin a site evaluation by reviewing available information about environmental contamination at the site, or emitted from the site. The first task is to find out how much contamination is present, where it is found, and how people might be exposed to it. Usually, MDH does not collect its own environmental sampling data; instead MDH relies on information provided by the Minnesota Pollution Control Agency (MPCA), and other government agencies, businesses, and the general public.

- Evaluating health effects: If there is evidence that people are being exposed—or could be exposed—to hazardous substances, MDH scientists will take steps to determine whether that exposure could be harmful to human health. The report focuses on public health, i.e., the health impact on the community as a whole and is based on existing scientific information.

- Developing recommendations: In the evaluation report, MDH outlines its conclusions regarding any potential health threat posed by a site and offers recommendations for reducing or eliminating human exposure to contaminants. The role of MDH in dealing with individual sites is primarily advisory. For that reason, the evaluation report will typically recommend actions to be taken by other agencies—including MPCA, or local government. However, if an immediate health threat exists, MDH will issue a public health advisory warning of the danger and will work to resolve the problem.

- Soliciting community input: The evaluation process is interactive. MDH starts by soliciting and evaluating information from various government agencies, the organizations responsible for cleaning up the site, and the community surrounding the site. Any conclusions about the site are shared with these groups and organizations that provided the information. Once an evaluation report has been prepared, MDH seeks feedback from the public. *If you have questions or comments about this report, you are encouraged to contact MDH*.

Please write to: Community Relations Coordinator
Site Assessment and Consultation Unit
Minnesota Department of Health
625 Robert St. North
Box 64975
St. Paul, MN 55164-0975

Or call: 651-201-4897 *or* 1- 800 - 657 - 3908
(toll free, then press the number 4 on your touch-tone phone)

Introduction

This health consultation evaluates potential exposures to contaminants found at the Lookout Mountain Village site (formerly the Finland Air Force Radar Base) in Finland, Minnesota. This document examines contaminated media (water, air and soil), transport mechanisms and routes of exposure (ingestion, inhalation and dermal contact) to determine the likelihood of individual exposure to contamination. The site is on the Minnesota Permanent List of Priorities (PLP; State Superfund). The Minnesota Pollution Control Agency (MPCA) requested this health consultation. MPCA project files along with electronic documents provided to the Minnesota Department of Health (MDH) were reviewed. These documents and several site visits by the MPCA and MDH staff from 1997 to 2003 form the basis for this health consultation.

Site Description and History

Lookout Mountain Village is approximately 140 acres of hilltop (formerly known as Finland Air Force Radar Base) on the North Shore of Lake Superior about half way between Duluth and Grand Marais near the town of Finland (Population approximately 450) (see Figures 1, and 2). A height finder and long-range search radar were operated at the base from the mid 1950s –1980. The site was sold to a private party in the early 1980s and has been owned by Finlandia LLC since August 1995. Finlandia owns and operates a wastewater treatment system at the Lookout Mountain Village in Finland, Minnesota. The system is designed to treat approximately 16,200 gallons per day of domestic wastewater and serves 43 single-family homes. Wastewater from 27 of these homes is directed through a 25,000-gallon holding tank and lift station before discharging to a sand filter. Wastewater from the remaining homes is directed by gravity through septic tanks to a sand filter. The MPCA has a Consent Decree with Finlandia LLC regarding the wastewater treatment facility that serves the Lookout Mountain Village (MPCA, 1998). The wastewater treatment plant is currently in compliance. However, numerous chemical and physical hazards are present in many of the buildings on site.

Buildings

The site contains 45 homes and an additional 20 commercial buildings. Many of the commercial buildings are stripped and gutted and appear to be structurally unstable. These buildings present physical and chemical hazards to anyone who enters them. Most of the buildings are not secure, and there are indications of regular trespassing in and around the buildings. Many of the buildings have leaking roofs, and missing doors and windows. It appears that individuals scavenge materials (such as copper wiring, scrap metal, and other building materials) from the buildings. Commercial space on site has been used for various purposes including a church youth group, a fish smoking business (no longer in operation because of code violations), and an appliance-recycling center. Small businesses have left behind trash when they vacate. For example, an appliance-recycling business left behind dozens of appliances (see Figure 3). A portion of Building 306 is filled with articles of clothing. Building 306 is missing windows, and water appears to be infiltrating the room where the garments are stored. The MPCA and MDH have not been given access to the interior of most commercial buildings after repeated attempts. On September 4, 2003, MPCA attempted to enter buildings 208, 108, and 303 but property management said they did not have keys.

Most of the buildings on site are accessible to foot traffic, and entrance is unhindered by lack of doors or windows in many cases. A gate was installed in the summer (2003) to discourage car traffic to the commercial building area. However, there is evidence of regular foot traffic and trespassing in many of the commercial buildings.

a) Residential Units

Nearly all of the 45 homes on the site appeared to be occupied when MDH visited in July 2003. The three homes visited by MDH had floor tiles suspected of containing asbestos. It is likely that the other housing units also contain asbestos tile floors. Asbestos tile floors have also been found in the commercial buildings. Long-term residents who have lived at the Lookout Mountain Village for several years were not notified of possible lead-based paint hazards until the summer of 2003. Most of the housing was built before 1978 when lead based paint was commonly used. MDH tested the new paint in three housing units for lead with a color indicator test kit, and there was no indication of lead in the surface paint. However, the testing was not complete and is not a substitute for a complete lead-based paint survey by a licensed contractor. Furthermore, the housing units have not been surveyed for asbestos containing materials by a licensed inspector. The MPCA has sent certified letters to Finlandia LLC requesting information pertaining to suspected asbestos-containing materials observed in numerous buildings on site in July 2002 and July 2003 (See Appendix A). Appendix B contains the MPCA asbestos inspection reports for September 2003 and December 2003.

Two other issues reported by residents are carbon monoxide and mold. During the spring of 2003, a family was sent to the hospital for carbon monoxide poisoning caused by a faulty furnace. Other residents have complained about mold. The total number and ages of children living on site are not known, but many of the homes have childrens' toys in the yards.

b) Building 203 (Heating Plant)

The Heating Plant room has 3 large boilers wrapped in deteriorated insulation (see glossary for a legal definition) containing suspected asbestos materials that have been pulverized. Note the amount of deterioration in the insulation from April 4, 2002, and June 5, 2003, in Figures 4, 5 and 6. The boilers contain many pounds of friable and pulverized thermal insulation. The boilers, walls, and ceiling contain large areas of deteriorated paint that is likely lead-based (see glossary for legal definitions). MDH staff tested the paint in Building 203 with a lead paint color indicator marker. The surface paint tested positive for lead. There is evidence of wind blowing materials in and out of the boiler room's missing and un-secured doors, making this building a lead source and a likely asbestos exposure hazard.

When the site was an operational radar base, it appears the some of the buildings were heated with hot water that was pumped from building 203 in elevated ducts containing thermal insulation. Figure 7 depicts the elevated ductwork (thermal system insulation). Based on the inspection of the ductwork remnants protruding from building 203, the insulation appears to contain asbestos. What became of the many pounds of suspected asbestos containing materials in the elevated ductwork is not known. It is possible that some of these materials are stock piled somewhere on site.

c) Building 207 (Dining Hall)
Portions of the dining hall ceiling are collapsing from extensive water infiltration. The building contains peeling paints (probable lead based) inside and out. There is a stockpile of suspected asbestos-containing pipe insulation stored in the dining hall that appears to have been scavenged from more than one location. The piping contains approximately 200 linear feet of insulation. (See Figure 8). Because the building is missing windows and doors, winds can stir up debris on the floor and cause snow to collect in drifts inside the building. Property management recently secured some of the dining hall's windows and doors.

d) Building 107 (Transportation)
Building 107 appears be a maintenance garage for heavy machinery. It has 3 large bay doors for receiving large machinery. One of the bay doors appears to be inoperable and remains open. The cement block building is covered with peeling (suspected) lead-based paint. Several of the blocks have fallen off the dilapidated building (see figure 9). There are 3 drums with unknown contents in front of the building, and approximately 45 transformers were stored in the garage bay. Some of the transformers contained PCBs, and the floor is stained with oil leaking from several of the transformers. The building also contains suspected asbestos-containing floor tiles that are crumbling from water infiltration. Other suspect asbestos containing materials include several long runs of water damaged piping insulation found on the heating system. Building 107 is next to partially deconstructed radar domes (see figure 9).

The MPCA sent letters in July 2002 and in July 2003 requesting information regarding asbestos-containing materials and lead based paint in the buildings on site (see Appendix A). In a letter to the MPCA, Finlandia LLC stated they were contacting an asbestos abatement contractor for asbestos abatement in the garage (building 107), but did not mention any other buildings (See Appendix C). The MPCA has advised Finlandia to not demolish any buildings on site without first conducting an asbestos and lead based paint survey. To date, no asbestos or lead based paint surveys have been conducted on site.

MDH documented the storage of 16 electrical transformers in building 107 in April 2, 2002. Subsequent testing of several transformers showed the presence of PCBs. By June 14, 2003, the number of transformers stored in building 107 increased to 46. Many of the transformers left stains on the garage floor (see figure 10). MPCA reported that 36 of the transformers contained PCB concentrations below the regulatory threshold of 50 ppm (considered non-PCB containing), and 10 transformers contained PCBs of 50-499 ppm. According to the MPCA, the 10 transformers containing PCBs greater than 50 ppm were sent to a hazardous waste facility by Cooperative Light and Power staff. Cooperative Light and Power shipped the remaining 36 transformers to B & B Transformers Inc for disposal. According to MPCA, Cooperative Light and Power has agreed to clean the PCB stains on the garage floor. Because the transformers were stored in various locations in the garage, the MPCA has recommended that the whole floor be cleaned. Many of the buildings on site have very old fluorescent light ballast that may contain PCBs.

The PCA collected two paint chips from Building 107; these were analyzed for lead at the MDH laboratory. Both samples tested positive for lead. The samples contained 0.05 -15.0 % lead by weight.

e) Building 303 Multi-Purpose

Building 303 was a multi-purpose building originally used for recreational activities. A smoked fish business most recently occupied building 303. The company sold smoked fish to the public. MDH has documented the dumping of partially burned fish carcasses and piles of trash scattered outside the building (see figure 11). Also located outside the building were abandoned vehicles and a dumpster filled with water-logged fish carcasses. The Minnesota Department of Agriculture cancelled the facility's permit in the summer of 2003. The trash and abandoned vehicles were removed in response to a MPCA warning for violation of solid waste management rules. On December 4, 2003, MDH and the MPCA observed the continued operation of the fish smoking business after the license had been cancelled.

f) Building 112 (Power Plant)

During a site visit on September 4, 2003, the MPCA collected 10 samples in building 112 for asbestos analysis. Table 1 lists the sample materials and their asbestos content. Several of the samples tested positive for chrysotile, and amosite. Asbestos-containing materials in building 112 were significantly deteriorated and friable (see glossary for legal definitions). Building 112 contains pounds of peeling paint that have accumulated on the floor (See Figure 12). The MPCA collected four paint chips in building 112, which MDH analyzed for lead. The paint chips lead content ranged from 0.3 – 1.2 percent by weight.

Table 1 Building 112 Power Plant Asbestos Samples Collected on September 4, 2003					
Sample Type	Sample Location	Layers	Percent of Sample	Fibrous Non-asbestos Content Total or Layer %	Asbestos % Content Total
Bacher board debris on floor	Building 112 main area	2	>99	Cellulose 90 Hair 5	None-detected
			>1	Cellulose 15 Hair 5	Chrysotile 30
Preform debris Along wall	Building 112 main area	1	100	Glass Fibers 2	Chrysotile 5
Preform debris Along wall	Building 112 main area	1	100	Glass Fibers 2	Chrysotile 5
Transite debris on floor	Building 112 main area	2	5	None Detected	None Detected
			95	Glass Fibers 1	None Detected
Transite debris on floor	Building 112 main area	1	100	None Detected	None Detected
12" pipe Magnesium based insulation debris	Building 112 main area	1	100	None Detected	Amosite 15
12" pipe Magnesium based insulation debris	Building 112 main area	1	100	None Detected	Amosite 15
9x9 green floor tile poor condition	Building 112 back entry	2	95	None Detected	Chrysotile 5
			5	None Detected	Chrysotile 10
Aircell from pipe	Building 112 bathroom	1	100	Cellulose 90	Chrysotile 2
Aircell from pipe	Building 112 bathroom	1	100	Cellulose 90	Chrysotile 2

Trash/Solid Waste

It is not uncommon to find scattered trash piles throughout the site consisting of general refuse, appliances, and other solid waste (see Figure 13). There is a history of burning trash at the site as recently as 2002 (MDH 2002). The Minnesota Pollution Control Agency (MPCA) issued a letter of warning to Lookout Mountain Village management (Finlandia LLC/Juno Investments) on June 11, 2003 for violations of Minnesota Solid Waste Rules 7035 (1). Finlandia management paid for the removal of several dozen cubic yards of solid waste and approximately 100 tires from the property in July 2003. Several of the buildings on site are piled with solid waste, and the accumulation and mismanagement of solid waste at the site has been a continuing problem.

Exposure Assessment

Residents in the homes near the Finland Radar site must come into physical contact with the contaminated soils or groundwater in order for the chemicals to have the ability to cause adverse health effects. In order for residents to come into contact with the chemicals of concern there must be a *completed exposure pathway*. A completed exposure pathway consists of five main parts that must be present for chemical exposure to occur. These include: 1) a source of the toxic chemicals of concern; 2) environmental transport, which is a way for the chemical to move from its source to

bring it into contact with the residents (soil, air, groundwater, surface water); 3) a point of exposure, which is a place where the residents come into physical contact with the chemical (on-site, off-site); 4) a route of exposure, which is how the residents come into physical contact with the chemical (drinking, eating, touching); and, 5) people who could be exposed, which are people living near the facility who come into physical contact with site-related chemicals.

The Finland Radar site is currently unfenced and provides unrestricted access to area residents. Approximately 45 homes are on the site. Toys seen outside the homes indicate small children are living on the site. Broken glass, graffiti, visible trash, and worn trails indicate that the exposure pathway is complete, and would likely include both adults and adolescents. The physical hazards (structural concerns, broken glass, etc.,) alone are cause for alarm. Particulates (asbestos insulation fibers, peeling paint, etc.) and the soil exposure pathway are of concern for chemical hazards.

Agency for Toxic Substance and Disease Registry (ATSDR) Child Health Considerations

ATSDR recognizes that the unique vulnerabilities of infants and children make them of special concern to communities faced with contamination of their water, soil, air, or food. Children are at greater risk than adults from certain kinds of exposures to contaminants at hazardous waste sites. A child's behavior and lifestyle will influence exposure. Children can be additionally exposed to environmental contaminants because children play in the dirt, put things in their mouth, and they ingest inappropriate items. Children often bring food into contaminated areas risking cross contamination when they eat items that have fallen to the ground or floor. In general, children ingest more soil than adults. In warm weather, children often spend significant time outdoors with little clothing for protection.A child's exposure to some environmental contaminants such as PCBs can start during their gestational development and continue with the ingestion of contaminated breast milk. The developing body systems of children can sustain permanent damage if exposures occur during critical growth stages. Children drink more fluids, eat more food, and breath more air per kilogram of body weight than adults, resulting in higher doses of chemical exposure per body weight. Children whose families are subsistence fisherman can be additionally exposed to PCBs from locally caught fish. Children who live on the Lookout Mountain Village site can be exposed to asbestos and lead contaminated soil or dust in their houses, private yards, and throughout their neighborhood. Most importantly, children depend completely on adults for risk identification and management decisions, housing decisions, and access to medical care.

Chemicals of Concern

Polychlorinated Biphenyls (PCB) Exposure and Toxicity

PCBs are very persistent chemicals. Degradation half-lives for PCBs are typically determined to be 2 to 10 years in soil, and less than 2 months in the air (ATSDR 1998). Higher chlorination of PCBs is associated with greater toxicity, lower vapor pressure (and therefore less evaporation), and slower degradation. The composition of a mixture of PCBs in the environment will, therefore, change, not only because of selective decomposition of PCB congeners but also because of different evaporation rates. Therefore, as an exposed PCB source ages, the ratio of highly chlorinated congeners to congeners with lesser chlorination may increase.

PCBs are lipid (fat) soluble chemicals and are directly absorbable by inhalation, ingestion, and through the skin of animals, including humans. This affinity for lipids and hydrophobic organic molecules allows PCBs to be stored in the fat of animals, including humans, and causes them to bind preferentially to the organic fraction of soil and sediment. The half-life for PCBs in animals is very long (about 7½ years in humans), and accumulation of PCBs can continue over an entire lifetime. Therefore, workers who are exposed to PCBs on the job will retain a large proportion of their overall dose even after the source of exposure has been removed.

The Environmental Protection Agency Integrated Risk Information System (IRIS) lists PCBs as probable human carcinogens based on the results of animal studies (EPA 1997a). Furthermore, PCBs may be associated with adverse effects other than cancer, such as immunological or developmental effects. Studies of workers who worked directly with PCBs suggest that exposure at high concentrations causes irritation of the skin, nose, and lungs, gastrointestinal discomfort, and changes in blood and liver (ATSDR 1998). Other studies suggest that the only harmful effect of occupational exposure to high levels of PCBs is a condition known as chloracne (James et al 1993).

MDH recommends minimizing all exposures to potential carcinogens. In its risk assessment activities, however, MDH uses an exposure that may be expected to add an incremental increase of 1 cancer case in 100,000 individuals exposed for a lifetime as a "negligible risk level." Using this established risk level as a limit, the exposure of individuals to PCBs should be limited to less than 5 nanograms per kilogram of body weight per day (ng/kg/day) (EPA 1997a). Inhalation exposures of volatilized PCBs from similar sources may be slightly less toxic than inhalation exposure to particulate sorbed PCBs, dermal exposure, or ingestion of PCB-contaminated soil or water as described above. It is important to note doses posing negligible health risk for both cancer and non-cancer endpoints are similar.

PCBs can be taken into the body from many sources, and they accumulate in the body over a lifetime. Therefore, the health criterion dose refers to average exposure from all sources over a lifetime. MDH has concerns about people's exposures to PCBs from sources outside the building, most notably from fish. Because of the proximity to the lake, it is assume that people living on the site might eat locally caught-fish. The MDH fish consumption advisory (MDH 2000) has very stringent advice for people eating fish from certain Minnesota lakes and rivers. MDH recommends that women of childbearing age not eat many popular species at all. This is based on studies of developmental effects on the children of women who consumed large amounts of PCB-contaminated fish.

Asbestos Toxicology

Chemical, physical, and biological processes used by the body to remove asbestos fibers play a role in asbestos toxicity. Asbestos is primarily a human health hazard through the inhalation of asbestos fibers in air. Long-term human and animal exposure to asbestos fibers through inhalation is associated with a buildup of scar-like tissue in the lungs known as asbestosis, with lung cancer, and with a cancer of the lining of the thoracic cavity (or pleura) and other internal organs known as mesothelioma. Asbestosis is characterized by a gradual decline in respiratory function, coughing, and breathlessness. Both lung cancer and mesothelioma may be relatively symptom-less until they reach an advanced stage. All three of these above conditions are typically diagnosed through chest X-rays and lung function tests. Evidence of asbestos exposure, in the form of pleural changes (such

as a thickening of pleural tissue, or the formation of pleural "plaques") can often be seen on chest X-rays even in the absence of disease. The time between exposure to asbestos and the occurrence of lung disease or cancer is long, usually between ten and 40 years (ATSDR 1999).

The mechanisms by which asbestos fibers cause disease are not clearly understood, but include the generation of reactive oxygen species on fiber surfaces, the production of growth factors by the body in response to injury caused by asbestos fibers, or direct injury to cells in the respiratory tract (Brody 1993; Voytek et al. 1990, ATSDR 1999). Human epidemiological studies have established a cause and effect relationship between asbestos exposure, and lung disease and cancer in workers. Environmental exposure to asbestos has also been found to be associated with higher rates of mesothelioma, and in some cases lung cancer in several areas of the world where asbestos fibers are exposed at the ground surface (ATSDR 1999, Luce et al. 2000). For lung cancer, the magnitude of the risk appears to be a complex function of a number of parameters, the most important of which are: (1) the level and the duration of exposure; (2) the time since exposure occurred; (3) the age at which exposure occurred; (4) the tobacco-smoking history of the exposed person; and (5) the type and size distribution of the asbestos fibers (ATSDR, 199). Skin contact with asbestos fibers is not believed to pose a health risk, but may result in a localized reaction.

Exposure to asbestos and cigarette smoke together result in substantially greater risk of lung disease and lung cancer (ATSDR 1999). Lung cancer mortality in smokers exposed to asbestos may be ten times higher than the risk to non-smokers exposed to asbestos, and fifty times that of people not exposed to asbestos who never smoked. Several mechanisms may contribute to this multiplicative increase in risk, including a reduction in fiber removal efficiency in smokers, and the adsorption by asbestos fibers of cancer-causing chemicals found in cigarette smoke (ASTDR 1999).

The various mineral types (such as chrysotile, amosite, etc.) are also important in the toxicity of asbestos, especially with regards to the induction of mesothelioma. Amphibole asbestos (the mineral type which includes amosite) is thought to be more potent than chrysotile for the induction of mesothelioma. There appears to be less of a difference in relative potencies between asbestos mineral types for the induction of lung cancer (Berman et al. 1995). The generally lower potency of chrysotile might be because it is more easily broken down into shorter fiber lengths than amphibole and removed by the body due, in part, to its chemical composition. Some studies suggest that over extended periods of exposure to chrysotile asbestos, a "steady state" may be reached where removal mechanisms equal the deposition of new asbestos fibers in the lung. This is not the case for amphibole asbestos, however, where studies indicate that due to its increased resistance to the body's metabolic processes, the total amount of amphibole asbestos in the lung increases continually with exposure, and no "steady state" is reached (Berman and Crump 1999).

Asbestos Exposure Pathways

There are a number of exposure pathways through which people may have been exposed to suspected asbestos containing particulates at the Lookout Mountain site. The exposure pathway of greatest concern for asbestos is inhalation exposure. Workers or trespassers at the site can be exposed when dusts are generated in windy conditions or when individuals scavenge materials, remodel, or alter site conditions in the commercial buildings. Additionally, ingestion and inhalation of suspected asbestos containing materials in residential properties on site is also a concern. Note that most of the buildings on site have not been surveyed for asbestos-containing materials.

There are other past and present exposure pathways of concern for residents in the community surrounding the site. The pathways, listed in approximate order of concern include:

- Potential inhalation of asbestos fibers released during disturbances of current site conditions
- Potential inhalation of asbestos fibers tracked into rentals by individuals who have entered contaminated areas.
- Potential inhalation of asbestos fibers entrained with particulate emissions from the open pit burning of solid waste materials.
- Potential ingestion of asbestos contaminated soil
- Potential inhalation of asbestos contaminated indoor dust.

Children playing in asbestos-contaminated buildings or in contaminated soil can be exposed. Exposures will vary based on many factors such as hand mouth activity, amount of disturbance, and contact frequency with contaminated materials.

Open pit burning of asbestos contaminated materials can create particulate emissions that may infiltrate nearby structures through open windows and doors. Asbestos-containing dusts may also be tracked into homes or businesses from other site locations where contamination is present. Household dust may thus serve as a continuing source of asbestos contamination in indoor air.

The potential for ingestion of asbestos particulate on fruits, herbs, or vegetables grown in contaminated soils is minimal if the produce is washed.

Lead Exposure and Toxicology

People are typically exposed to lead through a variety of media including air, water, food, dust and soil. Lead is persistent and can accumulate at the soil surface. The potential for lead exposure from soil is influenced by several site-specific factors, including the type of land use (i.e. play area, garden), frequency and duration of contact, and the lead concentration. In addition, the degree of vegetated cover in an area may be a factor because people are more likely to be exposed to lead in bare soil where direct contact is possible. Vegetated areas may also be a concern if the soil becomes uncovered or disrupted (e.g., digging or tilling).

Examples of other potential sources of lead include lead-based paint chips found in older structures, automobile emissions, past automobile wrecking/salvage operations, and open pit burning of solid waste. Regardless of the source of lead, there is potential for human health impacts in areas where exposure to lead contamination is regular or where lead concentrations are elevated. Children playing in lead contaminated buildings or in contaminated soil can be exposed. Exposures will vary based on many factors such as hand mouth activity, amount of disturbance, and contact frequency with contaminated materials.

Past and present exposure pathways of concern for residents in the community surrounding the site include:

- Potential ingestion of lead-contaminated dust or soil as well as paint chips in old buildings
- Potential inhalation or ingestion of lead-containing dust released during disturbances of site conditions

- Potential ingestion or inhalation of lead particulate tracked into rentals by those who have entered contaminated areas.
- Potential inhalation of lead-containing particulate emissions from the open pit burning of solid waste materials.
- Potential infiltration of lead-containing airborne dusts or particulates into homes or businesses.

Ongoing toxicological research indicates that low levels of lead exposure can cause adverse effects, although these effects may not be readily apparent or discernable (ATSDR 1992). Lead has been shown to affect nearly all organs or systems in the human body with the most sensitive being the nervous, blood forming, and cardiovascular systems. Effects include inhibition of heme synthesis and erythropoiesis, neurobehavioral toxicity, and cardiovascular toxicity. Lead has also been shown to cause reproductive and developmental effects, such as premature births, low-weight babies, and decreased mental ability in the infant.

Infants and young children have been demonstrated to be particularly vulnerable to lead exposure. This is based on a combination of several factors including:

- Intrinsic sensitivity of developing organ systems to lead,
- Behavioral characteristics that increase contact with lead from dust and soil (e.g., mouthing and pica behavior),
- Physiologic factors resulting in greater deposition of airborne lead in the respiratory tract and greater absorption efficiency from the gastrointestinal tract in children than in adults
- Transplacental transfer of lead that establishes a lead burden in the fetus, increasing the risk associated with additional exposure during infancy and childhood.

As a result of these factors related to increased susceptibility, health-based guidelines and risk estimates in soil are usually established for young children (1 to 6 years).

The Centers for Disease Control and Prevention (CDC) and Agency for Toxic Substances and Disease Registry (ATSDR) considers blood lead levels greater than 10 micrograms/ deciliter (μg/dL) to be elevated (ATSDR 1992). However, there is no established safe level for blood lead. Acceptable levels of lead in the environment and blood have been lowered in recent years because research indicates that adverse health effects can occur at low lead levels.

State of Minnesota Lead Standards

The State of Minnesota has established the following lead standards:
4761.1100 STANDARDS FOR LEAD IN PAINT, DUST, BARE SOIL, AND DRINKING WATER.

Subpart 1. **Paint.** Paint is lead-based if the paint:

A. contains lead in a concentration of at least one-half of one percent (5,000 parts per million) or more by dry weight as measured by atomic absorption spectrophotometry or by quantitative chemical analysis; or

B. registers at least one milligram of lead per square centimeter or more as measured by an x-ray fluorescence analyzer, unless atomic absorption spectrophotometry or quantitative chemical analysis shows that the lead content is less than one-half of one percent by dry weight.

Subp. 2. **Dust.** Dust is lead-contaminated if atomic absorption spectrophotometry or quantitative chemical analysis determines that the dust contains at least:

A. 50 micrograms of lead per square foot on an interior hard-surfaced floor or carpet;
B. 250 micrograms of lead per square foot on a window sill; or
C. 800 micrograms of lead per square foot on a window well.

Subp. 3. **Bare soil.** Bare soil on residential property or on a playground is lead-contaminated if it contains lead in a concentration of at least 1/100 of one percent (100 parts per million) by weight.

MDH noted many commercial buildings on site may contain lead levels in excess of 100 parts per million (ppm) due to the extensive use of suspected lead based paint. Access to most of the site is unrestricted and several footpaths are present in and around the commercial buildings.

Conclusions

- Many of the site buildings are not secured and pose a public health hazard due to the presence of chemical and physical hazards. Because of the evidence of trespassing, exposure is assumed to be occurring.

- Many buildings on site have not been characterized for lead-based paints, PCB-containing light ballasts, asbestos, and other chemical and physical hazards

Recommendations

- Restrict access to contaminated buildings.
- Conduct asbestos and lead surveys for all buildings and residential housing.
- Secure all windows and doors in contaminated buildings.
- Post signs on buildings with confirmed asbestos materials and deteriorated lead-based paint. These signs should state that the buildings contain asbestos and lead hazards (see Figure 14).
- Immediately secure Buildings 112, and 203.
- First perform a survey for asbestos and lead-based paint before beginning any building demolition.
- Identify and remove all PCB containing light ballasts at this site.
- Wash the PCB stained floor in building 107 according 40 CFR 761.123 (see glossary).
- Provide both MDH and MPCA with copies of the lead-based paint and asbestos surveys conducted on this site.

Public Health Action Plan

MDH will continue to work with the MPCA in addressing community concerns, assisting site investigations, and mitigating exposures through community education. MDH/ATSDR are available for reviewing any site sampling plans, and sample data results in order to address environmental health concerns at the site. MDH will distribute this health consultation, and/or an information sheet summarizing the information in this health consultation to area residents, will continue consultation activities with MPCA and other agency staff on investigations, monitoring and response action activities, and participate in any public outreach events.

References

1. ATSDR 1999. Agency for Toxic Substance and Disease Registry. Toxicological Profile for Asbestos. August 1999.

2. ATSDR. 1992. Toxicological Profile for Lead (Update). US Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA

3. ATSDR 1998. Toxicological Profile for Polychlorinated Biphenyls. Agency for Toxic Substances and Disease Registry, Atlanta, GA. Draft: December 1998.

4. Berman, D.W., Crump, K.S., Chatfield, E.J., Davis, J.M.G., and Jones, A.D. 1995. The sizes, shapes, and mineralogy of asbestos structures that induce lung tumors or mesothelioma in AF/HAN rats following inhalation. Risk Analysis 15(2): 181-195.

5. Berman, D.W. and Crump, K.S. 1999a. Methodology for Conducting Risk Assessments at Asbestos Superfund Sites, Part 2: Technical Background Document. EPA Contract No. 68-W9-0059. February 15, 1999.

6. Berman, D.W. and Crump, K.S. 1999b. Methodology for Conducting Risk Assessments at Asbestos Superfund Sites, Part 1: Protocol. EPA Contract No. 68-W9-0059. February 15, 1999.

7. Brody, D. J., Pirkle, J. L., Kramer, R. A., Flegal, K. M., Matte, T. D., Gunter, . W., Paschal, D. C. 1994. Blood lead levels in the US population. Phase 1 of the Third National Health and Nutrition Examination Survey (NHANES III, 1988 to 1991) Journal of the American Medical Association 272(4):277-283.

8. EPA 1986. Airborne Asbestos Health Assessment Update. Office of Solid Waste and Emergency Response. EPA Document #600/8-84/003F.

9. EPA 1997. Superfund Method for the Determination of Releasable Asbestos in Soils and Bulk Materials. Office of Solid Waste and Emergency Response. EPA Document #540-R-97-028.

10. EPA 2000a. Sampling and Analysis of Consumer Garden Products that Contain Vermiculite. EPA Office of Prevention, Pesticides, and Toxic Substances, August 2000. EPA Document #744-R-00-010.

11. EPA 1986. Airborne Asbestos Health Assessment Update. Office of Solid Waste and Emergency Response. EPA Document #600/8-84/003F.

12. EPA 1991. Health Assessment Document for Vermiculite. EPA Office of Research and Development, September 1991. EPA Document #600/8-91/037.

13. EPA 1997. Superfund Method for the Determination of Releasable Asbestos in Soils and Bulk Materials. Office of Solid Waste and Emergency Response. EPA Document #540-R-97-028.

14. EPA 1997a. Environmental Protection Agency, Integrated Risk Information System. Online - http://www.epa.gov/iris/, Office of Health and Environmental Assessment, Environmental Criteria Office, Cincinnati, OH. June 1997.

15. EPA 2000a. Sampling and Analysis of Consumer Garden Products that Contain Vermiculite. EPA Office of Prevention, Pesticides, and Toxic Substances, August 2000. EPA Document #744-R-00-010.

16. James, R.C., Busch, H., Tamburro, C.H., Roberts, S.M., Schell, J.D., and Harbison, R.D. 1993. Polychlorinated biphenyl exposure and human disease. Journal of Occupational Medicine 35: 136-148.

17. IRIS 2000. Integrated Risk Information System, U.S. Environmental Protection Agency. Found at http://www.epa.gov/iris/subst/0371.html. December 2000.

18. Minnesota Department of Health, Site File: Site visits to Lookout Mountain Village in 2002 and 2003.

19. MDH 2000. Minnesota Fish Consumption Advisory Report. Minnesota Department of Health, Division of Environmental Health, Health Risk Assessment Unit, St. Paul, MN. May 1999.

20. Minnesota Pollution Control Agency, Letter to Ms. Chache Scallen Re: Solid Waste Inspections Conducted at Lookout Village in Finland Minnesota, June 11, 2003.

21. Minnesota Pollution Control Agency, Consent Decree Re: A Wastewater Treatment Plant operating at Lookout Village, Finland Minnesota, June 11, 2003.

22. OSHA 2000. Occupational Safety and Health Administration, Permissable Exposure Limits. At http://www.osha-slc.gov/OshStd_data/1910_1001.html. November 2000.

23. Voytek, P., Anver, M., Thorslund, T., Conley, J., Anderson, E. 1990. Mechanisms of asbestos carcinogenicity. Journal of the American College of Toxicology 9: 541-550.

24. Williams, G.M. and Weisburger, J.H. 1991. Chemical Carcinogenesis. In: Amdur, M.O., Doull, J., and Klaassen, C.D., editors. Casarett and Doull's toxicology – the basic science of poisons. 4th Edition. New York: Pergamon Press. p. 127-133.

Figures

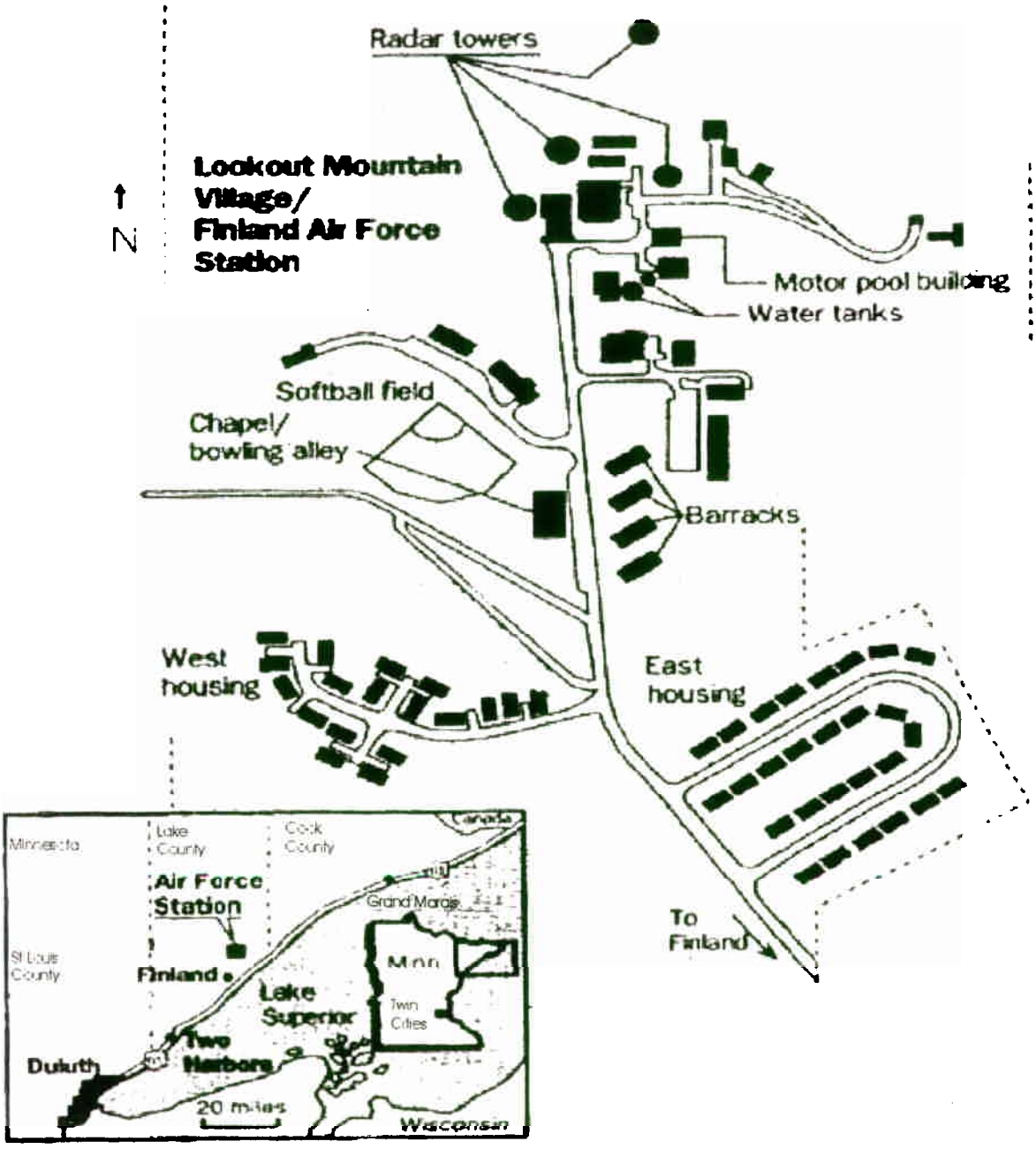


Figure 1
Site Map

Figure 2 Lookout Mountain Building Map

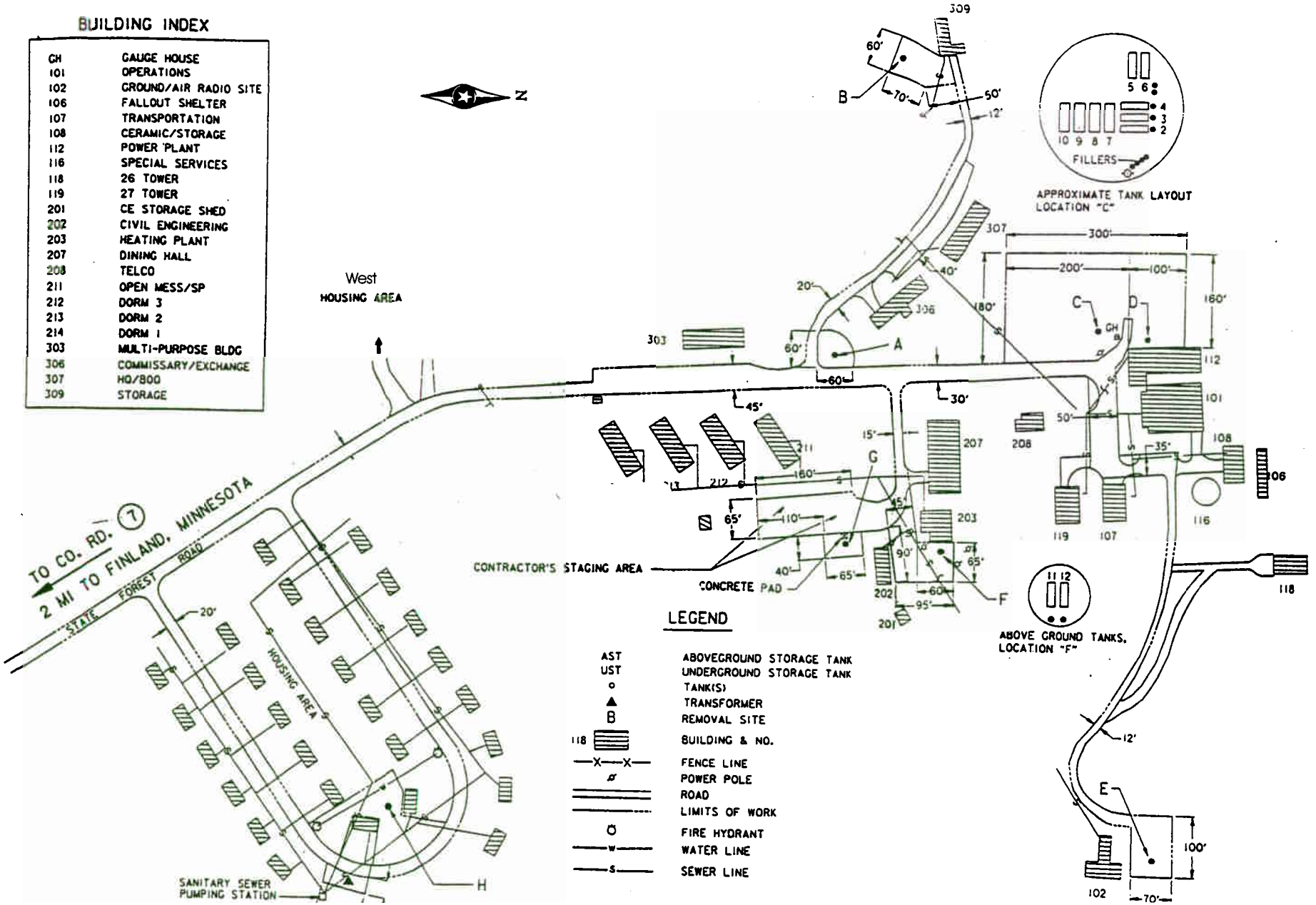


Figure 3 Burn Pit and Abandoned Appliances (2/2/02)

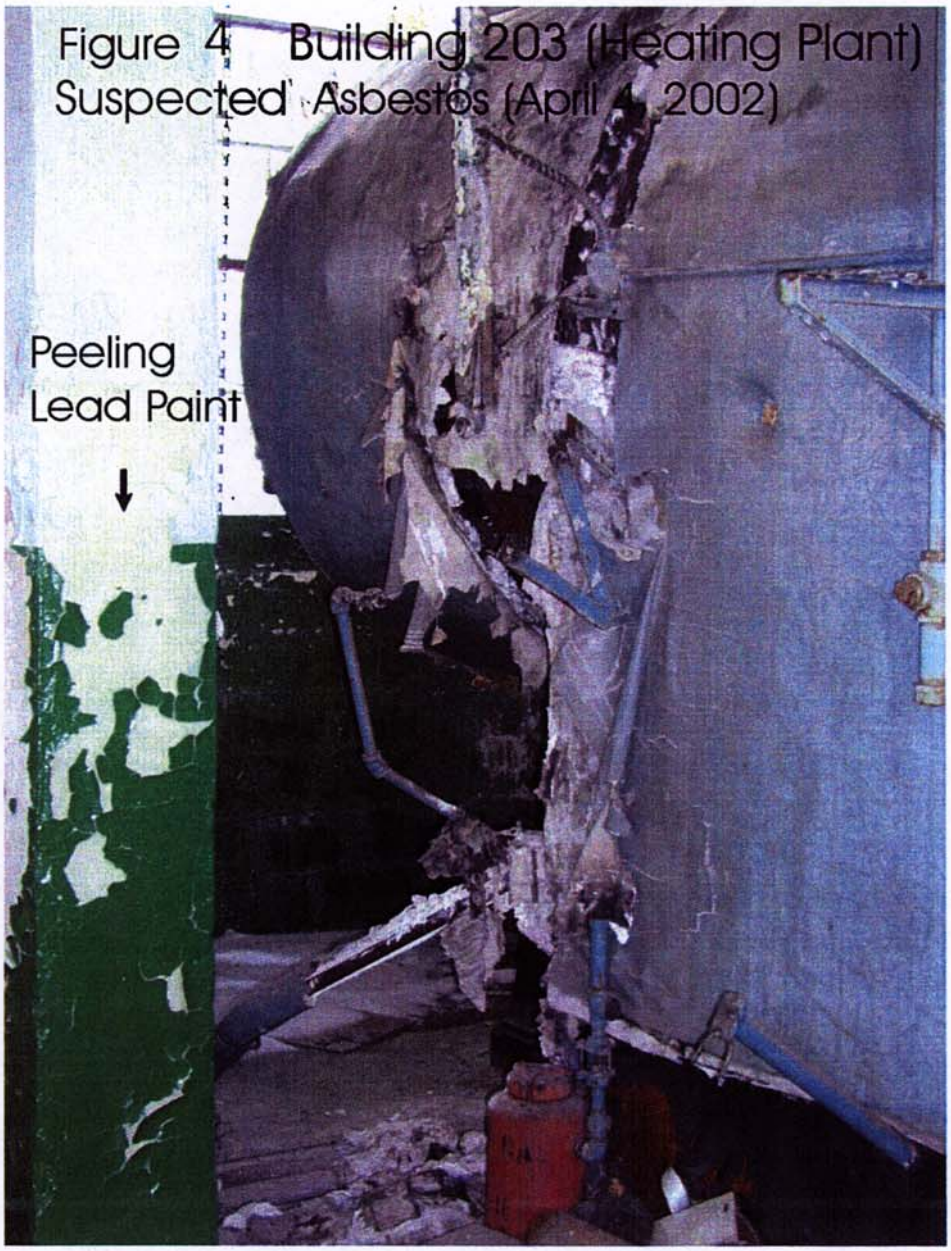
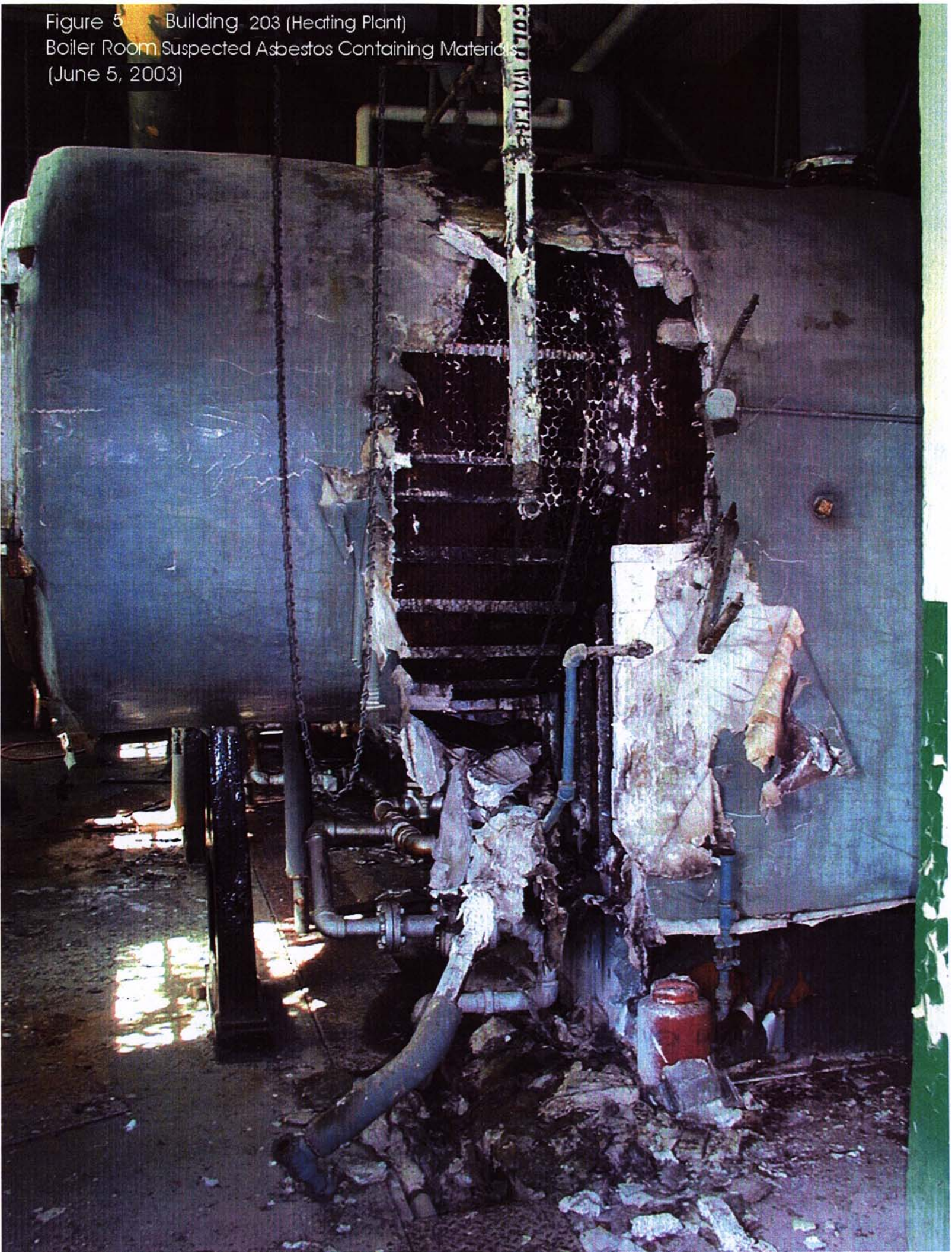


Figure 4 Building 203 (Heating Plant)
Suspected Asbestos (April 4, 2002)

Figure 5 Building 203 (Heating Plant)
Boiler Room Suspected Asbestos Containing Materials
(June 5, 2003)



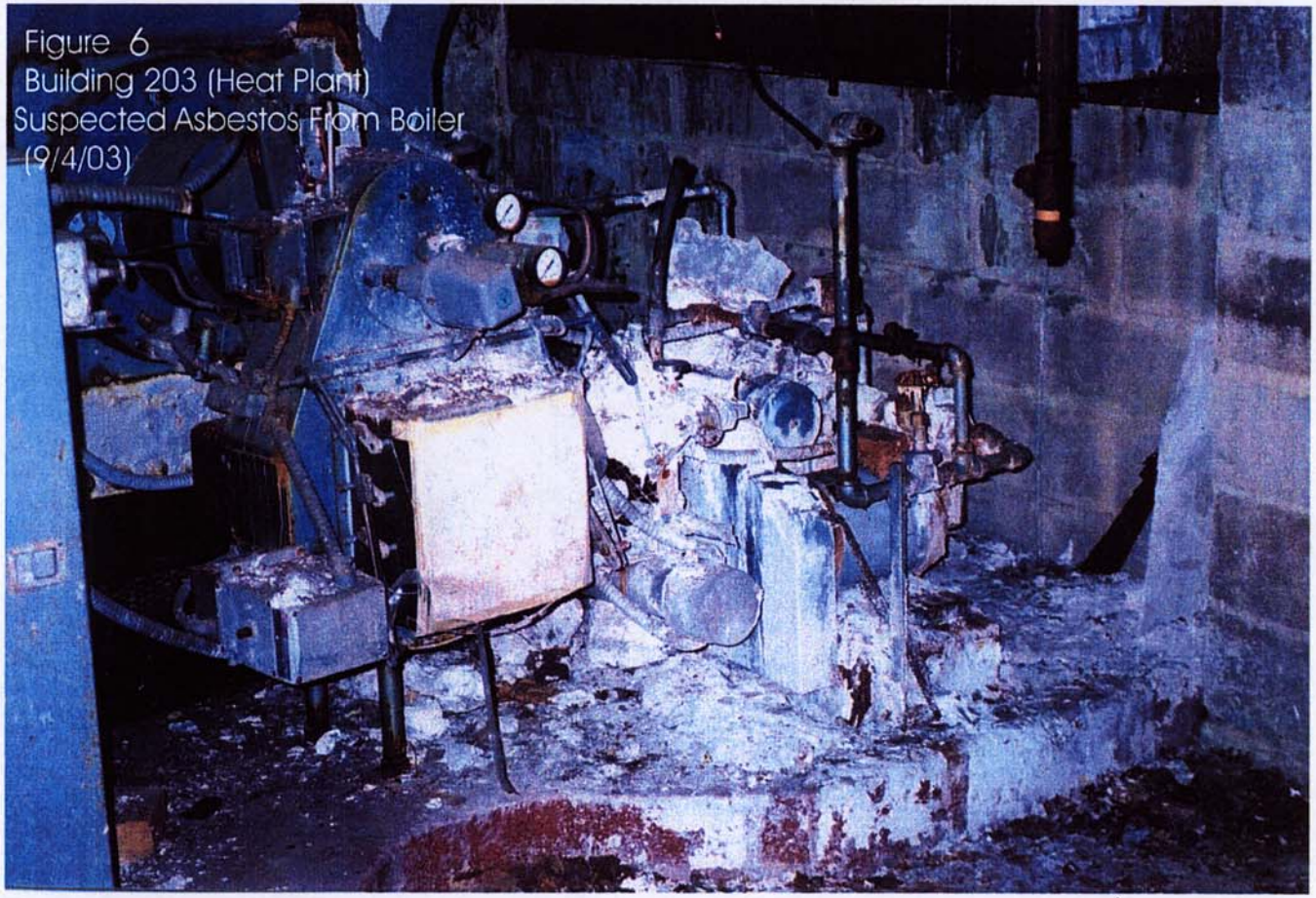
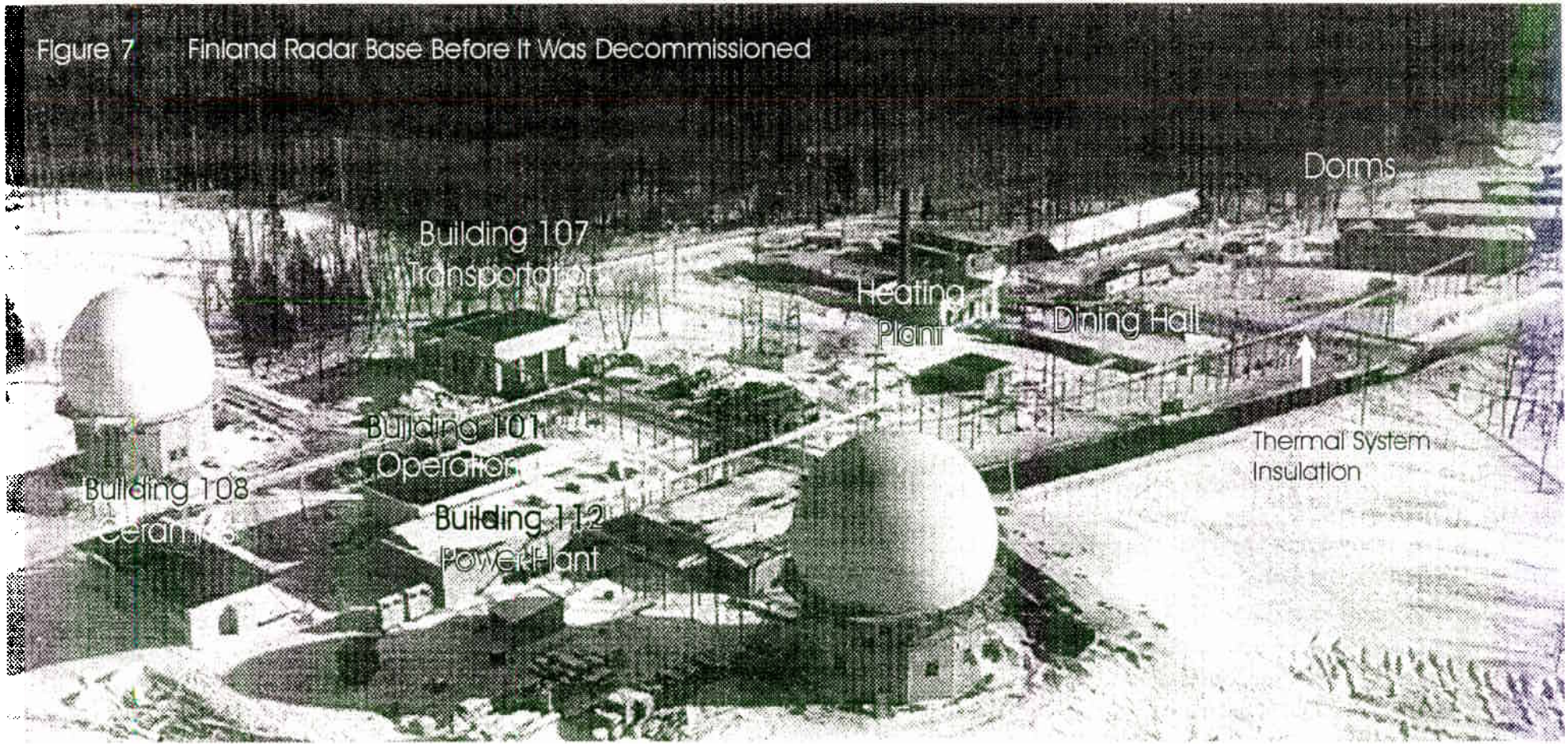


Figure 6
Building 203 (Heat Plant)
Suspected Asbestos From Boiler
(9/4/03)



An aerial view of the radar station in February 1958 shows its utilitarian buildings, including two of the four radar towers (the big white domes).

Figure 8
Dining Hall (Building 207)
4/2/03

Figure 9 Building 107 (9/4/03)

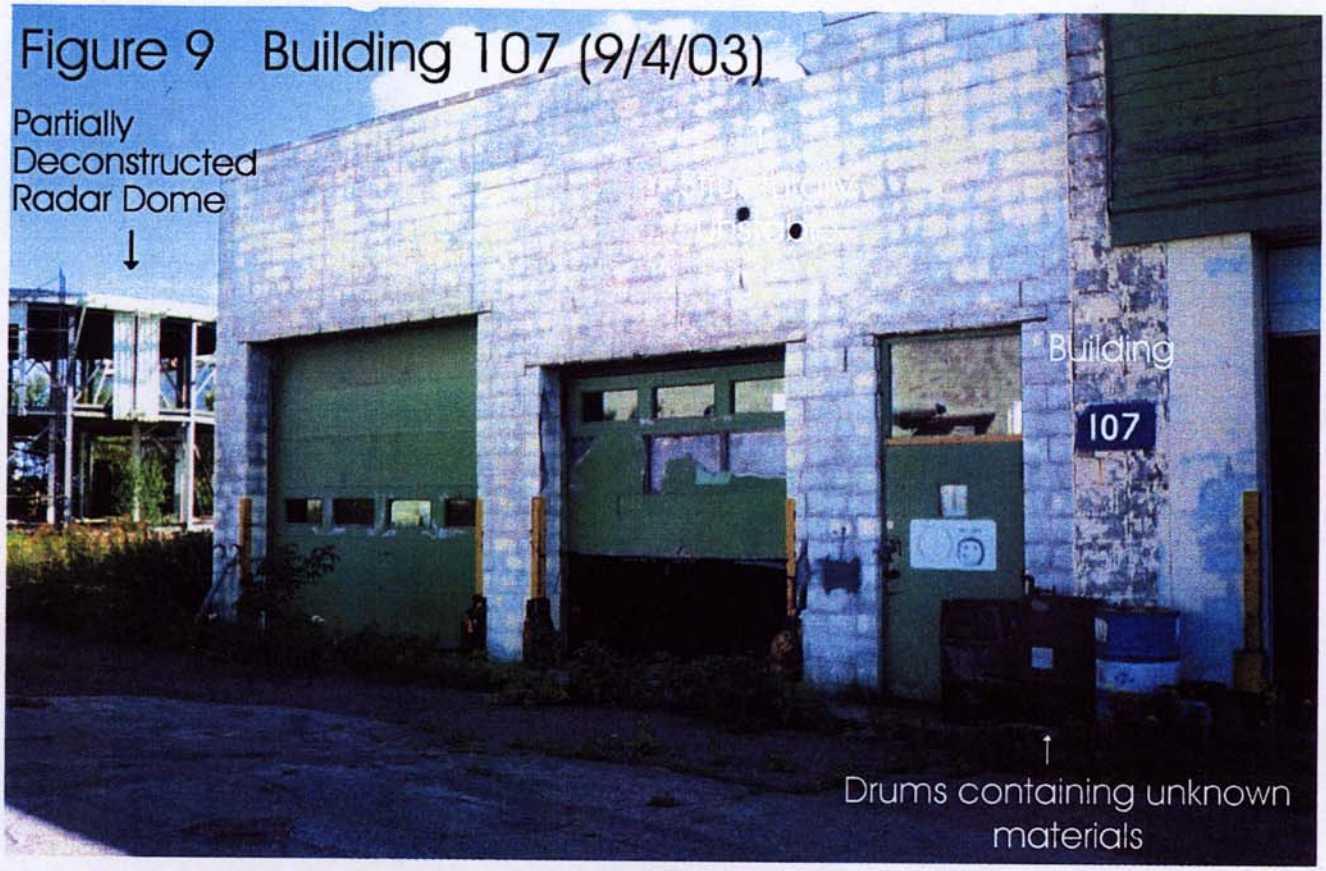


Figure 10

Figure 11
Building 303
Smoked Fish Business

Figure 12

September 4, 2003
Building #112
Flaking Lead Paint

Figure 13 Solid Waste Pile (6/9/03)

Figure 14

DO NOT ENTER THIS PROPERTY:
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
AIRBORNE ASBESTOS FIBERS

RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

FOR FURTHER INFORMATION CONTACT THE MINNESOTA DEPARTMENT OF HEALTH ASBESTOS UNIT AT (651) 215-0900.

SIGNED:_____

DATE:_____

[ ] THIS PROPERTY MUST BE CLEANED BY A LICENSED ASBESTOS ABATEMENT CONTRACTOR.

[ ] ITEMS IN THIS AREA ARE CONTAMINATED WITH ASBESTOS AND MUST BE APPROPRIATELY CLEANED.

Glossary

Damaged or Significantly Damaged Thermal System Insulation ACM
Thermal system insulation ACM on pipes, boilers, tanks, ducts, and other thermal system insulation equipment where the insulation has lost its structural integrity, or its covering, in whole or in part, is crushed, water-stained, gouged, punctured, missing, or not intact such that it is not able to contain fibers. Damage may be further illustrated by occasional punctures, gouges or other signs of physical injury to ACM; occasional water damage on the protective coverings/jackets; or exposed ACM ends or joints. Asbestos debris originating from the ACBM in question may also indicate damage (40 CFR 763.83).

Friable
When referring to material in a building means that the material, when dry, may be crumbled, pulverized, or
reduced to powder by hand pressure, and includes previously nonfriable material after such previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure (40 CFR 763.83).

Friable Asbestos Material
Any material containing more than 1 percent asbestos by weight which, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure (40 CFR 763.121(b)).

Key Terms and Definitions for Lead Based Paint

Certified Risk Assessor
An individual who has been trained by an accredited training program, as defined by this section, and certified by U.S. EPA pursuant to 40 CFR 745.226 to conduct risk assessments. A risk assessor also samples for the presence of lead in dust and soil for the purposes of abatement clearance testing (40 CFR 745.223).

Contract for the Purchase and Sale of Residential Real Property
Any contract or agreement in which one party agrees to purchase an interest in real property on which there is situated one or more residential dwellings used or occupied, or intended to be used or occupied, in whole or in part, as the home or residence of one or more persons (40 CFR 745.103).

Deteriorated Paint
Paint that is cracking, flaking, chipping, peeling, or otherwise separating from the substrate of a building component (40 CFR 745.223).

Inspection
For LBP this means (40 CFR 745.103):
1. a surface by surface investigation to determine the presence of LBP as provided in section 302(c) of the *Lead Based Paint Poisoning and Prevention Act* (42 USC 4822)
2. the provision of a report explaining the results of the investigation.

Interim Controls
A set of measures designed to temporarily reduce human exposure or likely exposure to lead-based paint hazards, including specialized cleaning, repairs, maintenance, painting, temporary containment, ongoing monitoring of lead based paint hazards or potential hazards, and the establishment and operation of management and resident education programs (40 CFR 745.223).

Lead-Based Paint Hazard
Any condition that causes exposure to lead from lead-contaminated dust, lead-contaminated soil, or lead contaminated paint that is deteriorated or present in accessible surfaces, friction surfaces, or impact surfaces that would result in adverse human health effects as identified by the U.S. EPA or authorized regulatory agency pursuant to TSCA section 403 (40 CFR 745.223).

Owner
Any entity that has legal title to target housing, including but not limited to individuals, partnerships, corporations, trusts, government agencies, housing agencies, Indian tribes, and nonprofit organizations except where a mortgage holds legal title to property serving as collateral for a mortgage loan, in which case the owner would be the mortgagor (40 CFR 745.103).

Paint in Poor Condition
More than 10 ft2 of deteriorated paint or exterior components with large surface areas; or more than 2 ft2 of
deteriorated paint on interior components with large surface areas (e.g., walls, ceilings, floors, doors); or more than 10 percent of the total surface area of the component is deteriorated on interior or exterior components with small surface areas (window sills, baseboards, soffits, trim) (40 CFR 745.223).

Risk Assessment
An onsite investigation to determine and report the existence, nature, severity, and location of Lead-Based Paint (LBP) hazards in residential dwellings, including (40 CFR 745.103):

1. information gathering regarding the age and history of the housing and occupancy by children under the age of 6
2. visual inspections
3. limited wipe sampling or other environmental sampling techniques
4. other activity as may be appropriate
5. provision of a report explaining the results of the investigation.

Visual Inspection for Risk Assessment
The visual examination of a residential dwelling or a child-occupied facility to determine the existence of
deteriorated lead-based paint or other potential sources of lead-based paint hazards (40 CFR 745.223).

EPA Identification Number
The 12-digit number assigned to a facility by U.S. EPA upon notification of PCB waste activity under 40 CFR 761.205 (40 CFR 761.3). (MN7210890565) license for PCBs in 1998.

Excluded PCB Products
PCB materials which appear at concentrations less than 50 ppm, including but not limited to (40 CFR 761.3):

1. Non-Aroclor inadvertently generated PCBs as a byproduct or impurity resulting from a chemical manufacturing process.
2. Products contaminated with Aroclor or other PCB materials from historic PCB uses (investment casting waxes are one example).
3. Recycled fluids and/or equipment contaminated during use involving the products described in paragraphs (a) and (b) of this definition (heat transfer and hydraulic fluids and equipment and other electrical equipment components and fluids are examples).
4. Used oils, provided that in the cases of paragraphs (1) through (4) of this definition:
   a) The products or source of the products containing < 50 ppm concentration PCBs were legally manufactured, processed, distributed in commerce, or used before October 1, 1984.
   b) The products or source of the products containing < 50 ppm concentrations PCBs were legally manufactured, processed, distributed in commerce, or used, i.e., pursuant to authority granted by U.S. EPA regulation, by exemption petition, by settlement agreement, or pursuant to other Agency-approved programs;
   c) The resulting PCB concentration (i.e. below 50 ppm) is not a result of dilution, or leaks and spills of PCBs in concentrations over 50 ppm.

Fluorescent Light Ballast
A device that electrically controls fluorescent light fixtures and that includes a capacitor containing 0.1 kg or less of dielectric (40 CFR 761.3).

Generator of PCB Waste
Any person whose act or process produces PCBs that are regulated for disposal under Subpart D of 40 CFR 761, or whose act first causes PCBs or PCB Items to become subject to the disposal requirements of Subpart D of 40 CFR 761, or who has physical control over the PCBs when a decision is made that the use of the PCBs has been terminated and therefore is subject to the disposal requirements of Subpart D of 40 CFR 761. Unless another provision of 40 CFR 761 specifically requires a site-specific meaning, “generator of PCB waste” includes all of the sites of PCB waste generation owned or operated by the person who generates PCB waste (40 CFR 761.3).

High Concentration PCBs
PCBs that contain 500 ppm or greater PCBs, or those materials which the U.S. EPA requires to be assumed to contain 500 ppm or greater PCBs in the absence of testing (40 CFR 761.123).

Double Wash/Rinse
A minimum requirement to cleanse solid surfaces (both impervious and nonimpervious) two times with an

appropriate solvent or other material in which PCBs are at least 5 percent soluble (by weight). A volume of PCB-free fluid sufficient to cover the contaminated surface completely must be used in each wash/rinse. The wash/rinse requirement does not mean the mere spreading of solvent or other fluid over the surface, nor does the requirement mean a once-over wipe with a soaked cloth. Precautions must be taken to contain any runoff resulting from the cleansing and to dispose properly of wastes generated during the cleansing (40 CFR 761.123).

Manifest
The shipping document U.S. EPA form 8700-22 and any continuation sheet attached to U.S. EPA form 8700-22, originated and signed by the generator of PCB waste in accordance with the instructions included with the form and Subpart K of 40 CFR 761 (40 CFR 761.3).

Municipal Solid Wastes
Garbage, refuse, sludges, wastes, and other discarded materials resulting from residential and non-industrial
operations and activities, such as household activities, office functions, and commercial housekeeping wastes (40 CFR 761.3).

PCB Household Waste
PCB waste that is generated by residents on the premises of a temporary or permanent residence for individuals (including individually owned or rented units of a multi-unit construction), and that is composed primarily of materials found in wastes generated by consumers in their homes. PCB household waste includes unwanted or discarded non-commercial vehicles (prior to shredding), household items, and appliances or appliance parts and wastes generated on the premises of a residence for individuals as a result of routine household maintenance by or on behalf of the resident. Bulk or commingled liquid PCB wastes at concentrations of >/= 50 ppm, demolition and renovation wastes, and industrial or heavy duty equipment with PCBs are not household wastes (40 CFR 761.3).

Porous Surface
Any surface that allows PCBs to penetrate or pass into itself including, but not limited to, paint or coating on metal; corroded metal; fibrous glass or glass wool; unglazed ceramics; ceramics with a porous glaze; porous building stone such as sandstone, travertine, limestone, or coral rock; low-density plastics such as styrofoam and low-density polyethylene; coated (varnished or painted) or uncoated wood; concrete or cement; plaster; plasterboard; wallboard; rubber; fiberboard; chipboard; asphalt; or tar paper. For purposes of cleaning and disposing of PCB remediation waste, porous surfaces have different requirements than non-porous surfaces (40 CFR 761.3).

Residential/Commercial Areas
Those areas where people live or reside, or where people work in other than manufacturing or farming industries. Residential areas include housing and the property on which housing is located, as well as playgrounds, roadways, sidewalks, parks, and other similar areas within a residential community. Commercial areas are typically accessible to both members of the general public and employees and include public assembly properties, institutional properties, stores, office buildings, and transportation centers (40 CFR 761.123).

Responsible Party
The owner of the PCB equipment, facility, or other source of PCBs or his/her designated agent (e.g., a facility manager or foreman). (40 CFR 761.123).

Spill
Both intentional and unintentional spills, leaks, and other uncontrolled discharges where the release results in any quantity of PCBs running off or about to run off the external surface of the equipment or other PCB source, as well as the contamination resulting from those releases. This policy applies to spills of 50 ppm or greater PCBs. The concentration of PCBs spilled is determined by the PCB concentration in the material spilled as opposed to the concentration of PCBs in the material onto which the PCBs were spilled. Where a spill of untested mineral oil occurs, the oil is presumed to contain greater than 50 ppm, but less than 500 ppm PCBs and is subject to the relevant requirements of this policy (40 CFR 761.123).

Spill Area
The area of soil on which visible traces of the spill can be observed plus a buffer zone of 1 foot beyond the visible traces. Any surface or object (e.g., concrete sidewalk or automobile) within the visible traces area or on which visible traces of the spilled material are observed is included in the spill area. This area represents the minimum area assumed to be contaminated by PCBs in the absence of precleanup sampling data and is thus the minimum area which must be cleaned (40 CFR 761.123).

Standard Wipe Test
For spills of high-concentration PCBs on solid surfaces, a cleanup to numerical surface standards and sampling by a standard wipe test to verify that the numerical standards have been met. This definition constitutes the minimum requirements for an appropriate wipe testing protocol. A standard-size template (10 centimeters (cm) x 10 cm) will be used to delineate the area of cleanup; the wiping medium will be a gauze pad or glass wool of known size which has been saturated with hexane. It is important that the wipe be performed very quickly after the hexane is exposed to air. U.S. EPA strongly recommends that the gauze (or glass wool) be prepared with hexane in the laboratory and that the wiping medium be stored in sealed glass vials until it is used for the wipe test. Further, U.S. EPA requires the collection and testing of field blanks and replicates (40 CFR 761.123).

TSCA
The Toxic Substances Control Act (15 U.S.C. 2601 et seq.) (40 CFR 761.3).

TSCA PCB Coordinated Approval
The process used to recognize other federal or state waste management documents governing the storage, cleanup, treatment, and disposal of PCB wastes. It is the mechanism under TSCA for accomplishing review, coordination, and approval of PCB waste management activities which are conducted outside of the TSCA PCB approval process, but require approval under the TSCA PCB regulations at 40 CFR 761 (40 CFR 761.3).

Unit
A particular building, structure, or cell used to manage PCB waste (including, but not limited to, a building used for PCB waste storage, a landfill, an industrial boiler, or an incinerator) (40 CFR 761.3).

ACBM Asbestos-Containing Building Material
ACM Asbestos-Containing Material
AHERA The Asbestos Hazard Emergency Response Act of 1986
ATSDR Agency for Toxic Substances and Disease Registry
CFR Code of Federal Regulations
MAG Magnesium Based Insulation
MDH Minnesota Department of Health
MPCA Minnesota Pollution Control Agency
PCBs Polychlorinated Byphenyls

Appendix A

Minnesota Pollution Control Agency Letter To Finlandia LLC Requesting Asbestos Survey Information and MPCA Asbestos Inspection Report

Minnesota Pollution Control Agency

July 15, 2003

CERTIFIED MAIL NO. 7002 0510 0001 9397 5290
RETURN RECEIPT REQUESTED

Ms. Nora Rottier
Finlandia, LLC
1501 University Avenue Southeast No. 306
Minneapolis, MN 55414

RE: Request for Information - Finlandia LLC (Air Force Base) Superfund Site

Dear Ms. Rottier:

On April 2, 2002, the Minnesota Pollution Control Agency (MPCA) conducted an inspection of the Finland Air Force Base, located in Finland, Minnesota, owned by Finlandia LLC (Company). During the time of the inspection, MPCA staff observed numerous buildings with suspect asbestos-containing (ACM) material in poor condition. Suspect ACM included floor tile, wrapped boiler and piping, etc.

The MPCA is requesting the information below pursuant to Minn. Stat. § 116.07, subd. 9, Minn. Stat. § 116.091, subd. 1, and Section 114 of the Clean Air Act, 42 U.S.C. Section 7414. The state of Minnesota has been delegated Section 114 authority by the United States Environmental Protection Agency. The MPCA requests the following information.

1. Has an asbestos survey been conducted on any of the buildings on site? If so, please provide a copy.
2. Has any asbestos abatement been conducted? If so, when did it occur and who performed the abatement? Please include names, addresses, and phone numbers of all parties that may have done any ACM removal from any of the buildings.
3. What types of ACM was removed and from which buildings? Please provide copies of any documentation that the Company received from the people or companies that did asbestos removal prior to, during or after the abatement, including any written reports and waste shipment records.
4. What are the current plans for the site, i.e., are buildings scheduled to be renovated or demolished? Does the Company have anyone contracted to do renovation or demolition? If so, please provide a copy of all contracts with any contractors doing work on any of the buildings.

It has come to the MPCA staff's attention that some of the buildings on site will be demolished in the near future. Be advised that Title 40 Code of Federal Regulation (CFR) 61.145 (a) states, in part " . . . the owner or operator of a demolition or renovation activity and prior to the commencement of the demolition or renovation, thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable ACM . . ." In addition to the asbestos survey, abatement will be required to be conducted by a Minnesota Department of Health licensed abatement contractor. Enclosed is a copy of 40 CFR Part 61 which covers the asbestos and demolition requirements for regulated facilities such as the Finland Air Force Base.

Please submit the information requested above within ten days of the receipt of this letter. If you have any questions regarding this matter, please contact me at (651) 297-5518.

Sincerely,

Jacqueline M. Deneen

Jacqueline M. Deneen
Asbestos Program Coordinator
Metro Region
Regional Environmental Management Division

JMD:dac

cc: Ann Cohen, Attorney General's Office
Kathleen Winters, Attorney General's Office
Stephen B. Scallen, Owner
Dan Pena, MDH St. Paul Office
Curt Gadazc, Solid Waste Officer, Lake County
Chacke Y. Scallen, Vice President, Juno Investment Corporation
Jim Gumtow, Manager, Look Out Village, Finland, MN
Heidi Kroening, MPCA Duluth Office
Jane Mosel, MPCA Duluth Office
Asbestos File

July, 2002

CERTIFIED MAIL NO.
RETURN RECEIPT REQUESTED

Steve Scallen, Owner

Finland, Minnesota 5

Re: Request for Information - Finlandia LLC (Air Force Base) Superfund Site

Dear Mr. Scallen:

On April 2, 2002, the Minnesota Pollution Control Agency (MPCA) conducted an inspection of the Finland Air Force Base, located in Finland, Minnesota, owned by Finlandia LLC (Company). During the time of the inspection, MPCA staff observed numerous buildings with suspect asbestos-containing (ACM) material in poor condition. Suspect ACM included floor tile, wrapped boiler and piping, etc.

The MPCA is requesting the information below pursuant to Minn. Stat. § 116.07, subd. 9, Minn Stat. § 116.091, subd. 1, and Section 114 of the Clean Air Act, 42 U.S.C. Section 7414. The state of Minnesota has been delegated Section 114 authority by the United States Environmental Protection Agency. The MPCA requests the following information.

1. Has an asbestos survey been conducted on any of the buildings on site? If so, please provide a copy.
2. Has any asbestos abatement been conducted? If so, when did it occur and who performed the abatement? Please include names, addresses, and phone numbers of all parties that may have done any ACM removal from any of the buildings.
3. What types of ACM was removed and from which buildings? Please provide copies of any documentation that the Company received from the people or companies that did asbestos removal prior to, during or after the abatement, including any written reports and waste shipment records.
4. What are the current plans for the site, i.e., are buildings scheduled to be renovated or demolished? Does the Company have anyone contracted to do renovation or demolition? If so, please provide a copy of all contracts with any contractors doing work on any of the buildings.

It has come to the MPCA staff's attention that some of the buildings on site will be demolished in the near future. Be advised that Title 40 Code of Federal Regulation (CFR) 61.145 (a) states, in part " . . . the owner or operator of a demolition or renovation activity and prior to the commencement of the demolition or renovation, thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable ACM . . ." In addition to the asbestos survey, abatement will required to be

conducted by a Minnesota Department of Health licensed abatement contractor. Enclosed is a copy of 40 CFR Part 61 which covers the asbestos and demolition requirements for regulated facilities such as the Finland Air Force Base.

Please submit the information requested above within ten days of the receipt of this letter. If you have any questions regarding this matter, please contact me at (651) 297-5518.

Sincerely,

Jacqueline M. Deneen
Asbestos Program Coordinator
Metro Region
Regional Environmental Management Division

cc: Chacke Scallen, Vice President, Juno Investments
Heidi Kroening, MPCA Duluth Office
Jane Mosel, MPCA Duluth Office
Dan Pena, MDH Duluth Office
Curt Gadazc, Solid Waste Officer, Lake County
Jim Gumtow, Manager, Look Out Village, Finland, MN
Asbestos File

Appendix B

MPCA asbestos inspection reports September 2003, and December 2003

Minnesota Pollution Control Agency

ASBESTOS DEMOLITION & RENOVATION INSPECTION FIELD DATA COLLECTION CHECKLIST

I. General Information:

Contractor Name: NA

Contractor Address:

Telephone Number:( ) Fax Number ( )

Facility/Site Name: Finlandia LLC/ Lookout Mtn. Village

Facility Site Address: Finland Air Base

Telephone Number: ( ) Fax Number ( )

Date of Inspection: 12/4/03 Time of Inspection: 9:00am-11:30am

Inspection Team (Case Lead and all other members of the inspection team) CLH, JMD

Reason For Inspection: (check all that apply)

1. Routine Compliance Inspection:_____ 2. Citizen Complaint:_____
2. Suspected Non-Notifier:_____ 4. Joint:_____
5. Order/Consent Decree:_____ 6. Other: X-Superfund site

Site Activity at Time of Inspection: no activity

II. Pre-Entry Observations and Building Information:

Building Occupied: Yes: X (residential) No: X (non-residential)

Use: Old Airforce Barracks-residential; Old AirForce operations-vacant

Age:_____ Square Feet: unknown-multiple buildings

Is the worksite in an area of high population density or otherwise likely to impact on a sensitive receptor(describe): Yes-residents live nearby in an isolated area; Already contamination issues on-site.

Land use surrounding Site: Wooded/ undeveloped

III. Remote Observations:

	Yes	No
Visible Emissions to the Outside Air	_____	X
Suspect RACM debris observed outside removal area:	X	_____

If yes, describe: MPCA staff observed and documented RACM debris on the floor in Building #205; #112; #211; #214

IV. Entry To Site:

List Each Person, by name, title, and company to whom credentials were presented:

Jim Gumtoe-Site Manager for Finlandia LLC

Was entry granted: X _____

If entry was refused identify the person by name, title, and company who denied entry:

_____

V. Contractors and other Operators involved in the Site:

A. Asbestos Abatement Contractor

Name of Abatement Project Supervisor: N/A

Is the Supervisor licensed by MN as an asbestos abatement site supervisor:

Number of Employees on-site: _____

B. Facility Owner

Name and title of on-site representative: Jim Gumtoe, Site Manager

C. Environmental Consulting/Air Monitoring Firm

Company Name: NA

Address: _____

_____

Telephone Number: _____

Identify the Hygienist by name and title: _____

Determine how often the hygienist is present in the actual areas where asbestos is being removed:

_____

_____

VI. Activity Description

Actual Asbestos Disturbance Start Date: unknown-prior to 9/2003

Start Date as listed on the notification: N/A

Describe changes/modifications to notification: Many non-residential buildings from AirForce Base are falling apart and contain friable asbestos and lead-based paint deterioration is prevalent.

Type of Abatement Occurring:

1. Renovation: Scheduled_____ Emergency_____
2. Demolition Scheduled__X__ Ordered_____

VII. Inspection Observations

(Building #112: friable RACM on floor in unsecured building; #205: broken floor tile from abatement in basement closet; #211: broken floor tile from abatement in boxes in upstairs room;#212: ceiling tile on floor in bathroom; #214: TSI from pipe salvaging in first floor bathroom)

Types of Suspect RACM

Insulation

Pipe insulation (felt, air cell, preform, mag) mag (**Building #214**)

Block Insulation:_____ Asbestos-Containing Paper:_____

Surfacing Materials

Plaster:_____ Plaster:_____ Stucco:_____

Joint Compound:_____ Spray-on (acoustical, decorative, or insulative):____

Miscellaneous

Ceiling Tiles: X_____ Acoustical Tiles:_____

(Building #212)

Category I Nonfriable ACM

Packings:_____ Gaskets:_____ Asphalt Roofing Products:_____

Resilient Floor Coverings (vinyl asbestos tile, asphalt asbestos tile, linoleum) X__

Will the Category I ACM be disturbed by the Demo/Reno? Yes

Is the Category I ACM in good condition: No

Will the Category I ACM be made regulated(describe removal methods used): Yes

Building #205; Building #108; Building #112; Building #211; Building #212; Building #213; Building #214

Category II Nonfriable ACM

Extrusion Panels:_____ Clapboards/Shingles:_____ Millboard:_____

Vinyl Wallpaper:_____ Pegboard:_____ Putties:_____

Sealants:_____ Adhesives (mastics): X Paints and coatings:_____

Asbestos cement, sheeting or piping:_____ Textiles:_____

Will the Category II ACM be disturbed by the Demo/Reno? Yes

Is the Category II ACM in good condition: No

Will the Category II ACM be made regulated (describe removal methods used): Yes- materials are in bad condition so any method would make it regulated

VIII. Emission Control Procedures

	YES	NO	NA
ACM not discovered until after demo/reno commenced:	___	___	X
Unit/Section removal:	___	X	___
If yes, is RACM wet whenever exposed:	___	X	___
Is the unit being removed carefully lowered to the floor without dropping, throwing, sliding, damaging, or otherwise disturbing the RACM:	___	X	___
Owner/Operator granted a variance from wetting:	___	X	___
(if temp <32 degrees is the reason, examine temp records)			

IX. Evaluation of Wetting

Is there a water or wetting agent nearby:	___	___	X
If "yes" what equipment is used to apply it:_____			
Is water or a wetting agent observed being sprayed on RACM:	___	___	X
Is there visible dust (airborne or settled), or dry suspect RACM in the immediate vicinity of the operation:	X	___	___

Explain: Dry suspect debris covered the floor in numerous buildings.

Is RACM awaiting containerization adequately wet:	___	___	X
Are the containers leak-tight:	___	___	X
Are there any open or damaged containers:	___	___	X

How many:_____

Are the contents of these containers adequately wet: _____

Are there any visible emissions:____

X. Waste Control

		YES	NO	NA
1.	Visible Emissions to the outside Air:	___	___	_X_
2.	Is there any suspect ACM on the ground:	_X_	___	___
3.	Is the Owner/Operator choosing to properly label and seal ACWM in leak-tight containers as an alternative to the "No Visible Emission" Standard (if yes, answer the questions below):	___	___	_X__

		YES	NO	NA
a.	Adequately wet and placed in leak-tight containers:	___	___	_X__
b.	Is ACWM labeled with the OSHA warning label:	___	___	_X__
c.	Is the ACWM labeled with the Waste Generator Label:	___	___	_X__
4.	Are vehicles/containers used in the transport of ACWM labeled during loading and unloading:	___	___	_X__
5.	Is all ACWM being deposited at a site operating in accordance with the provisions of 61.154:	___	___	_X__

XI. Waste Manifests: the following information may not be available on-site

There was no active abatement done at the site yet.

1.	For all ACWM transported off the Facility site maintain WSR with the following info:			
a.	Name, address, & phone # of the Waste generator:	___	___	___
b.	Name & address of the MPCA:	___	___	___
c.	Quantity of ACWM listed in cubic meters or yards:	___	___	___
d.	Name & phone # of the disposal site operator:	___	___	___
e.	Name & physical site location of the disposal site:	___	___	___
f.	The date transported:	___	___	___

g. A certification that the ACWM is accurately described: ___ ___ ___

2. Are copies of WSR being maintained for two years: ___ ___ ___

XII. Sample(s):

Second set of numbers indicate building # where sample taken

Sample #	Picture #	Time	Sample Type
1-101		900-1130 am	Floor tile with mastic
2-212		900-1130 am	Ceiling tile
3-214		900-1130 am	TSI debris
4-214		900-1130 am	TSI debris
5		900-1130 am	
6		900-1130 am	
7		900-1130 am	

XIII. Comments:

Comments should include recommendations/discussions with Owner/Operator as well as a description of removal methods, packaging procedures and any observations made involving the project.

See violation section and other sections for asbestos comments.

Building #101: 1 exterior paint sample; 1 sample of floor tile with mastic; 1 sample of 1x1 ceiling tile

Building #107: 2 exterior paint samples

Building #108: Floor tile in bad condition, fluorescent lights and ballasts

Building #112: Still unsecured since September 2003; Took 4 paint samples from floor

Building fire #7500: Processing smoked fish in the building; Floor tile in bad condition-renters going to remove the tile.

Building #205: Floor tile abated from multiple points in the building-broken and piled in a closet in the basement (1 sample of floor tile with mastic from closet).

Building #211: Floor tile removed from first floor and upstairs; Floor tile from abatement stacked in boxes in upstairs room-took one sample of floor tile.

Building #212: Ceiling tile broken up in bathroom (1 sample); Floor tile in bad condition (upstairs)

Building #213: Floor tile in bad condition throughout building

Building #214: Pipe salvaged from first floor bathroom (2 samples)

Violation(s):

List violation citation and a short description of the violation

Asbestos in poor condition in all building inspected. Possible violations for improper abatement of floor tile in Buildings #205 and #211. Pipe salvaging in Building #214 disturbed TSI.

Lead-based paint in poor condition-flaking off walls and substrate and covering floor in all accessible buildings.

All buildings need to be secured to avoid exposure to residents. Clean-up and abatement of RACM and LBP need to occur prior to renovation or demolition. An asbestos and lead survey need to occur as well.

Inspector Signature

Date

Minnesota Pollution Control Agency

ASBESTOS DEMOLITION & RENOVATION INSPECTION FIELD DATA COLLECTION CHECKLIST

I. General Information:

Contractor Name: NA

Contractor Address: _____

Telephone Number: ( ) _____ Fax Number ( ) _____

Facility/Site Name: Finlandia LLC/ Lookout Mtn. Village

Facility Site Address: Finland Air Base

Telephone Number: ( ) _____ Fax Number ( ) _____

Date of Inspection: 9/4/03 Time of Inspection: 9:45am-11:30am

Inspection Team (Case Lead and all other members of the inspection team) CLH, JMD

Reason For Inspection: (check all that apply)

1. Routine Compliance Inspection: _____
2. Citizen Complaint: _____
2. Suspected Non-Notifier: _____
4. Joint: _____
5. Order/Consent Decree: _____
6. Other: X-Superfund site

Site Activity at Time of Inspection: no activity

II. Pre-Entry Observations and Building Information:

Building Occupied: Yes: X (residential) No: X (non-residential)

Use: Old Airforce Barracks-residential; Old AirForce operations-vacant

Age: _____ Square Feet: unknown-multiple buildings

Is the worksite in an area of high population density or otherwise likely to impact on a sensitive receptor(describe): Yes-residents live nearby in an isolated area; Already contamination issues on-site.

Land use surrounding Site: Wooded/ undeveloped

III. Remote Observations:

:	Yes	No
Visible Emissions to the Outside Air	_____	X
Suspect RACM debris observed outside removal area:	X	_____

If yes, describe: MPCA staff observed and documented RACM debris on the floor in Building #112; Building #101; Building #107; Building #203. *Some building not accessible.

IV. Entry To Site:

List Each Person, by name, title, and company to whom credentials were presented:

Jim Gumtoe-Site Manager for Finlandia LLC; Steve Scanlon-woner of Juno (co-owner/manager with Finlandia LLC)

Was entry granted: X _____

If entry was refused identify the person by name, title, and company who denied entry:

_____

V. Contractors and other Operators involved in the Site:

A. Asbestos Abatement Contractor

Name of Abatement Project Supervisor: N/A

Is the Supervisor licensed by MN as an asbestos abatement site supervisor:

Number of Employees on-site: _____

B. Facility Owner

Name and title of on-site representative: Jim Gumtoe, Site Manager

C. Environmental Consulting/Air Monitoring Firm

Company Name: NA

Address: _____

_____

Telephone Number: _____

Identify the Hygienist by name and title: _____

Determine how often the hygienist is present in the actual areas where asbestos is being removed:

VI. Activity Description

Actual Asbestos Disturbance Start Date: unknown-prior to 9/2003

Start Date as listed on the notification: N/A

Describe changes/modifications to notification: Many non-residential buildings from AirForce Base are falling apart and contain friable asbestos and lead-based paint deterioration is prevalent. Building #107 is the first building scheduled to be demolished.

Type of Abatement Occurring:

1. Renovation: Scheduled_____ Emergency_____
2. Demolition Scheduled__X__ Ordered_____

VII. Inspection Observations

(Building #107: TSI on pipes; Building #203: mag falling off boilers; Building #207: aircell on pipes sticking out of building; Building #112: mag, perform, aircell; Building #101: TSI on boilers)

Types of Suspect RACM

Insulation

Pipe insulation (felt, air cell, preform, mag) mag, perform, aircell

Block Insulation:_____ Asbestos-Containing Paper:_____

Surfacing Materials

Plaster:_____ Plaster:_____ Stucco:_____

Joint Compound:_____ Spray-on (acoustical, decorative, or insulative):____

Miscellaneous

Ceiling Tiles: X_____ Acoustical Tiles:_____

(Building #101)

Category I Nonfriable ACM

Packings:__X__ Gaskets:_____ Asphalt Roofing Products:_____

Resilient Floor Coverings (vinyl asbestos tile, asphalt asbestos tile, linoleum) X__

Will the Category I ACM be disturbed by the Demo/Reno? Yes

Is the Category I ACM in good condition: No

Will the Category I ACM be made regulated(describe removal methods used): Yes

Building #101; Building #112; Building #203

Category II Nonfriable ACM

Extrusion Panels: X Clapboards/Shingles: ____ Millboard: ____

Vinyl Wallpaper: ____ Pegboard: ____ Putties: ____

Sealants: ____ Adhesives (mastics): X Paints and coatings: ____

Asbestos cement, sheeting or piping: X Textiles: ____

Will the Category II ACM be disturbed by the Demo/Reno? Yes

Is the Category II ACM in good condition: No

Will the Category II ACM be made regulated (describe removal methods used): Yes-

materials are in bad condition so any method would make it regulated

VIII. Emission Control Procedures

	YES	NO	NA
ACM not discovered until after demo/reno commenced:	___	___	X
Unit/Section removal:	___	X	___
If yes, is RACM wet whenever exposed:	___	X	___
Is the unit being removed carefully lowered to the floor without dropping, throwing, sliding, damaging, or otherwise disturbing the RACM:	___	X	___
Owner/Operator granted a variance from wetting:	___	X	___
(if temp <32 degrees is the reason, examine temp records)			

IX. Evaluation of Wetting

Is there a water or wetting agent nearby:	___	___	X
If "yes" what equipment is used to apply it: ____			
Is water or a wetting agent observed being sprayed on RACM:	___	___	X
Is there visible dust (airborne or settled), or dry suspect RACM in the immediate vicinity of the operation:	X	___	___

Explain: Dry suspect debris covered the floor in numerous buildings.

Is RACM awaiting containerization adequately wet:	___	___	_X_
Are the containers leak-tight:	___	___	_X_
Are there any open or damaged containers:	___	___	_X_

How many:_____

Are the contents of these containers adequately wet: ____

Are there any visible emissions:____

X. Waste Control

		YES	NO	NA
1.	Visible Emissions to the outside Air:	___	___	_X_
2.	Is there any suspect ACM on the ground:	_X_	___	___
3.	Is the Owner/Operator choosing to properly label and seal ACWM in leak-tight containers as an alternative to the "No Visible Emission" Standard (if yes, answer the questions below):	___	___	_X__

		YES	NO	NA
a.	Adequately wet and placed in leak-tight containers:	___	___	_X__
b.	Is ACWM labeled with the OSHA warning label:	___	___	_X__
c.	Is the ACWM labeled with the Waste Generator Label:	___	___	_X__
4.	Are vehicles/containers used in the transport of ACWM labeled during loading and unloading:	___	___	_X__
5.	Is all ACWM being deposited at a site operating in accordance with the provisions of 61.154:	___	___	_X__

XI. Waste Manifests: the following information may not be available on-site

There was no active abatement done at the site yet.

1.	For all ACWM transported off the Facility site maintain WSR with the following info:			
a.	Name, address, & phone # of the Waste generator:	___	___	___
b.	Name & address of the MPCA:	___	___	___
c.	Quantity of ACWM listed in cubic meters or yards:	___	___	___
d.	Name & phone # of the disposal site operator:	___	___	___
e.	Name & physical site location of the disposal site:	___	___	___
f.	The date transported:	___	___	___

g. A certification that the ACWM is accurately described: ___ ___ ___

2. Are copies of WSR being maintained for two years: ___ ___ ___

XII. Sample(s):

All samples taken from Building #112

Sample #	Picture #	Time	Sample Type
1		1030-1130 am	Backer board debris-floor
2		1030-1130 am	Preform debris along wall
3		1030-1130 am	Preform debris along wall
4		1030-1130 am	Transite debris on floor
5		1030-1130 am	Transite debris on floor
6		1030-1130 am	12" pipe mag debris
7		1030-1130 am	12" pipe mag debris
8		1030-1130 am	9x9 green floor tile-poor condition
9		1030-1130 am	Aircell-bathroom pipe
10		1030-1130 am	Aircell-bathroom pipe

XIII. Comments:

Comments should include recommendations/discussions with Owner/Operator as well as a description of removal methods, packaging procedures and any observations made involving the project.

See violation section and other sections for asbestos comments.

Building #107 (scheduled for demo first): PCB's still there; unknown drums; LBP flaking; pipe runs with friable RACM

Building #203: Pipes sticking out on top-ACM?; uncovered drums outside that supposed to contain floor tile asbestos; disturbed mag on boilers

Building #207: Not accessible; Aircell on pipes coming out of building

Building #208: Not accessible

Building #112: Took 10 asbestos samples; Worst condition of all building-disturbed asbestos covering the floor; flaking lead-based paint all over the floor—whole building should go as ACM contaminated

Building #108: Not accessible

Building #101: RACM on boilers, ceiling tile, floor tile –some disturbed; Building appears unsafe

Sample #1 (Backer board-floor) result as 30% Chrysotile asbestos.
Sample #2 (Preform debris along wall) result as 5% Chrysotile asbestos.
Sample #3 (Preform debris along wall) result as 5% Chrysotile asbestos.
Sample #4 (Transite debris on floor) result as non-detect.
Sample #5 (Transite debris on floor) result as non-detect.

Sample #6 (12" pipe mag debris) result as 15% Amosite asbestos.
Sample #7 (12" pipe mag debris) result as 15% Amosite asbestos.
Sample #8 (9x9 green floor tile-poor condition) result as 5% Chrysotile in floor tile and 10% Chrysotile asbestos in mastic.
Sample #9 (Aircell-bathroom pipe) result as 2% Chrysotile asbestos.
Sample #10 (Aircell-bathroom pipe) result as 2% Chrysotile asbestos.

Violation(s):

List violation citation and a short description of the violation

Asbestos in poor condition and covering the floor of Building #112; #101; #203 (disturbed boilers)-see Section VII for details

Lead-based paint in poor condition-flaking off walls and substrate and covering floor in all accessible buildings.

All buildings need to be secured to avoid exposure to residents. Clean-up and abatement of RACM and LBP need to occur prior to renovation or demolition. An asbestos and lead survey need to occur as well.

Inspector Signature

Date

Appendix C

Finlandia LLC/Juno Investments
Letter to the Minnesota Pollution Control Agency

JUNO INVESTMENT CORPORATION
1501 UNIVERSITY AVENUE SE, MINNEAPOLIS, MINNESOTA 55414
TELEPHONE (612) 623-0335
FAX (612) 623-0646

August 11, 2003

Jane Mosel
MPCA
525 Lake Avenue South Suite 400
Duluth, MN 55802

Dear Ms. Mosel:

We are reporting on progress at our project in Finland, Minnesota.

First, I need to mention that all the debris shown on the enclosed photographs, which were represented to me as the current condition, had already been removed at the time of your visit. Since the other photographs, all of which were not labeled, were not known to us, we cannot comment on many of them.

Second, the transformers were tested by CLP for PCB's, and all the transformers containing PCB's were removed. I enclose the paperwork on the removal. We paid all the cost of the removal, although we believe that CLP owned the transformers. CLP has promised that the other transformers, which involve no PCB's and no violation of any kind, would be removed by them by today. They have not been removed yet and we have contacted them today about this. Today they said that they would be removed by the end of August.

Third. The gate has been installed and security improved. Most of the open buildings have been secured.

Fourth. We have completed negotiations with an asbestos abatement contractor for removal of the asbestos in the garage building. We expect this work to proceed in accordance with MPCA procedures shortly.

Fifth. We are contacting lead abatement contractors regarding the garage building and we will let you know how those discussions come out.

Sixth. The sewage treatment plant update project has been completed and the plant is operating.

Seventh. The management has been after residents to clean up their yards, with very nice results. There are two or three problem yards remaining, including and we are working on those.

We are concerned with MPCA's interest in several issues which seem unrelated to the sewage treatment plant or the TCE project by the US government. We wish you would put more effort into getting the Air Force to clean up the mess they created. We do not understand why part of the visiting team comes and says "nothing has changed in five years" or why photographs are shown of conditions that no longer remain, as if they did remain. We want to cooperate with you and your agency in all parts of the environmental agenda, and we thank you for coming to Minneapolis to meet with me.

Sincerely,

Chacke' Y. Scallen

Chacke' Y. Scallen
Vice President

Certification

This Finland Radar Station (Lookout Mountain Village) Health Consultation was prepared by the Minnesota Department of Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was begun.

Technical Project Officer, Cooperative Agreement Team, SSAB, DHAC, ATSDR

The Division of Health Assessment and Consultation, ATSDR, has reviewed this public health consultation and concurs with the findings.

for RE

Team Leader, Cooperative Agreement Team, SSAB, DHAC, ATSDR