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EPA Superfund
Record of Decision:

CHESHIRE GROUND WATER CONTAMINATION
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CHESHIRE, CT
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DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION

Cheshire Ground Water Contamination
Cheshire, Connecticut

STATEMENT OF PURPOSE

This decision document presents the selected No Action decision for the Cheshire Ground Water Contamination Site (the "Site"), located in Cheshire, Connecticut. This document was developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and to the extent practicable, the National Contingency Plan (NCP); 40 CFR Part 300 et seq. (1990). The Region I Director of the Office of Site Remediation and Restoration has been delegated the authority to approve this Record of Decision.

The State of Connecticut has concurred with the No Action decision.

STATEMENT OF BASIS

This decision is based on the administrative record compiled for the Site which was developed in accordance with Section 113 (k) of CERCLA. The administrative record is available for public review at the Cheshire Public Library in Cheshire, Connecticut and at the EPA Region I Office of Site Remediation and Restoration Record Center in Boston, Massachusetts. The administrative record index (attached as Appendix A to the ROD) identifies each of the items which comprise the administrative record upon which the selection of the remedial action is based.

DESCRIPTION OF THE SELECTED REMEDY

EPA has determined that No Action is necessary to address the contamination at the Site. The Site poses no current or potential threat to human health or the environment.

DECLARATION

EPA has determined that its response at this site is complete and no remedial action is necessary to ensure protection of human health and the environment. Therefore, the site now qualifies for inclusion on the Construction Completion List.

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Region I

RECORD OF DECISION SUMMARY

DECEMBER 1996

CHESHIRE GROUNDWATER CONTAMINATION

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I. SITE NAME, LOCATION AND DESCRIPTION

A. General Description

The Cheshire Ground Water Contamination site (the Site), located in the northwestern corner of Cheshire, New Haven County, Connecticut, includes the industrial property at 604 West Johnson Avenue where disposal of waste material was conducted and, in addition, those places where waste material emanating from this property has come to be located in the ground water (refer to Figure 1). The Site is immediately bounded by vacant land situated atop a low north-south trending hill to the east, industrial property to the south, and Knotter Drive and Route 691 to the west and north, respectively (refer to Figure 2).

The Site is primarily occupied by an industrial buildings at 604 West Johnson Avenue. Immediately surrounding the approximately 70,000 ft 2 building are paved parking areas to the south, west and north. Office space is located in the southerly extension of the building while manufacturing areas occupy the rest of the building space. A loading dock is located at the northwest side of the building. Two ponds are located on the property. A larger, lower pond is located adjacent to the western parking lot. This pond is in part natural, but it has been excavated and expanded from its original extent. The smaller, upper pond located to northwest of the building is about 7 feet higher than the lower one and is an artificial impoundment. A single-family residence and a manufacturer of stainless steel medical needles are located immediately south of the 604 West Johnson Avenue property across West Johnson Avenue. The regional hydrology of this area in south-central Connecticut is drained principally by the Quinnipiac River and six smaller rivers. Judd Brook drains land in the immediate area of the Site. Judd Brook is a tributary to the Ten Mile River; the confluence of the Judd Brook and the Ten Mile River is about 3,000 ft south-southeast of the 604 West Johnson Avenue Property. The Ten Mile River joins the Quinnipiac River approximately 1.8 miles northeast of the confluence Judd Brook and the Ten Mile River. Mean annual streamflow at a partial-record streamflow-gaging station on Judd Brook at West Johnson Avenue is estimated to be 9.8 ft 3/s. Judd Brook also receives discharge from the ground-water-flow system in the area.

B. Geology and Hydrogeology

The primary source of recharge to the ground-water-flow system is precipitation; recharge from private septic systems may be a local secondary source. Measurement of groundwater levels indicates that the predominant ground water flow direction is from the low bedrock hill on the eastern side of the Site to the west toward the lower pond at 604 West Johnson Avenue and southwest toward the Judd Brook or the wetlands along Judd Brook (Figure 3). The lower pond receives ground water discharge on its eastern side and is presumed to lose water to the surrounding aquifer on its western side. It is assumed that the upper pond also is connected hydraulically to the aquifer and receives groundwater discharges on its eastern side and loses water on its western side; however, the upper pond may be perched or poorly connected to the aquifer.

Residences and businesses within the immediate vicinity of the Site receive public water from the South Central Connecticut Regional Water Authority (SCCRWA). The SCCRWA operated a cluster a five public-supply wells at the North Cheshire Well Field about 2 miles southeast of the Site.

A more complete description of the Site can be found in the report on Geohydrology and Conceptual Model of a Ground-Water-Flow System Near a Superfund Site in Cheshire, Connecticut prepared by the U.S. Geological Survey.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

A. Land Use and Response History

Land use in the area surrounding the Site is a mix of residential, commercial and industrial. For an undetermined period of time prior to 1966 the Site was used for agricultural purposes. Greenhouses formerly existed on the property located to the east. The as yet undeveloped 604 West Johnson Avenue property was acquired in October 1966 by Michael J. Lembo. Michael J. Lembo conveyed title of the property to Cheshire Associates in December 1966. Title to the property was conveyed in June 1984 by Cheshire Associates to Michael J. Lembo and Samuel Feinerman as Trustees, under the provisions of a Trust Agreement known as the "Lembo-Feinerman Cheshire Trust". The property has been leased by a few tenants. The property was initially leased to the Valley National corporation in August 1966. Valley National conducted contract packaging, expandable polystyrene foam molding, injection molding, and thermofoaming on the property until 1979. The Valley National Corporation was merged into S. Curtis & Son, Incorporated in 1975. In 1977, S. Curtis & Son Incorporated changed its name to Curtiscorp, Incorporated. The lease was assigned from Curtiscorp Incorporated to the Cheshire Molding Company in 1979. The Cheshire Molding Company also operated custom injection molding operations on the property

until 1980. Cheshire Molding is also reported to have sublet a portion of the building to a tool machine company. Cheshire Molding Company assigned the lease to North American Philips Corporation in 1981. Airpax Division of North American Philips Corporation operated on the property until 1995, manufacturing electro-mechanical and electronic devices (indicators and timers. The building is currently occupied by another tenant. The Cheshire Industrial Park is located across West Johnson Avenue approximately 1,000 feet south of the Site.

The specific hazardous substance use, storage and disposal practices of the Valley National Corporation and Cheshire Molding Company are unknown, but it is believed that effluent from their operations was disposed of through an underground drainpipe on the property. This pipe, which was reportedly sealed prior to Airpax occupying the property, is believed to have discharged from in-ground pits inside the northwest corner of the building to the larger pond. It is also alleged that non-contact cooling water from the molding machines was collected in former drain trenches and discharged to the on-site pond. Floor drains existing at the time of occupancy of Airpax were also reportedly sealed; their previous discharge point is unknown. Airpax used one floor trench to direct their tumbling wastewater discharges to an on-site wastewater treatment system. The wastewater traveled through the floor trench to settling pits and an evaporator in the northwest corner of the building. Airpax Corporation was permitted by the Connecticut Department of Environmental Protection (CTDEP) to discharge metal finishing wastewater and cooling system blowdown to the Town of Cheshire sewerage system. Airpax eliminated this discharge in 1992. Settled sludge as well as the alkaline wastewater were then transported off-site. Methylene chloride,1,1,1-tricloroethane, and trichlorotrifluoroethane were formerly used by airpax to degrease parts. Methylene chloride and 1,1,1-trichloroethane, as well as waste oils, were formerly stored in tanks along the northern wall of the building. Approximately four degreaser baths were located in different areas of the building.

Contamination on the 604 West Johnson Avenue property has also been associated with a 10,000 gallon underground No. 4 fuel tank formerly located on the northwestern side of the building. It is believed that this tank replaced a tank which perhaps contained No.2 fuel oil. Other evidence of contamination has included dark-toned spills and stains in the parking lot to the west of the building near the loading dock, and mounded material and light-toned circular objects, possibly containers, observed along the northern edge of the building in the 1970,s. An abandoned septic system exists under the western parking lot on the property. The property was connected to the town sewer system in 1983. Soils stained with oily materials were evident near the building in 1980. As a result of this surface discoloration, Ground Water Associates, Inc. prepared a December 1980 report on ground water quality at the Site. Initial investigations indicated a petrochemical odor and oil and grease in wells installed onsite and a sheen around the edges of the large pond and in water seeping from the pond banks. Additional test holes installed to quantify the distribution of petrochemicals onsite indicated the highest levels of hydrocarbon contamination near the northwest corner of the building. Low levels of volatile organic and extractable organic compounds were also detected in water samples.

EPA involvement with the Site commenced in 1985 after the Site was identified through a review of background information for another property in Cheshire. EPA sampled groundwater, subsurface soils, surface water, and sediment on the 604 West Johnson Avenue property, and groundwater from two residential drinking water wells in support of a Site Inspection of the property completed in 1986. In 1990, the Site was paced on EPA's National Priorities List (NPL) of hazardous waste sites, making it eligible for federal funding for investigation and cleanup. The Site was defined as a plume of contamination from an unknown source detected in wells on property located at 604 West Johnson Avenue and in a nearby residential well.

Two industrial sites, including the 604 West Johnson Avenue property, were viewed as possible sources of the contamination in the former well, which lay between the two industrial areas. (The residential well is no longer in use). Contamination south of West Johnson Avenue at the second industrial facility has been associated with a former 1,000-gallon underground storage tank and a former industrial leachfield. Waste oil, waste electrolytic solution, and spent solvents were stored in the underground storage tank between 1978 and 1983. The tank was removed in July 1986. During removal, two openings approximately 2 in. by 2.5 ft were noted on each end of the tank, and a gray sludge at the bottom of the tank exhibited a characteristic solvent odor. Groundwater contamination by volatile organic compounds (VOCs) has been documented at this property since July 1986. A soil-vapor extraction system was operated at the site of the former underground storage tank from August 1991 through November 1993 to remediate volatile organic contamination of the unsaturated zone. Contaminants identified in the unconsolidated deposits and bedrock include perchloroethylene (PCE),trichloroethylene (TCE), methylene chloride, chloroform, 1,1-dichloroethylene (DCE), 1,2-dichloroethane (1,2-DCE), trichloroethane (TCA) and 1,1-dichloroethane (DCA). Concentrations greater than 10,000 micrograms per liter (ug/l) PCE, 3,5000 ug/l TCE, and 5,000 ug/l chloroform have been found in ground water from location OW-1 at this property at various times from June 1989 to February 1991. Contamination by PCE, TCA, DCE and DCA also has been documented at a background well to this property, identified as HOLO-5.

Various parties have conducted sampling at the 604 West Johnson Avenue property to determine whether significant levels of contamination existed in the soils, sediments, surface water and groundwater. Haley & Aldrich conducted a soil vapor survey on the 604 West Johnson Avenue property in 1990 at the request of the property owner, the Lembo-Feinerman Cheshire Trust. The objective of the survey was to determine whether occupants of the building might be exposed to vapors emanating from beneath the floor of the building or from other locations on the property. Vapor-phase VOCs, primarily TCA, were detected in surficial sods in the vicinity of the northwestern corner of the building and the northerly overhead door, along the northerly wall, and near two sealed floor drains. EPA's review of this study reveals limitations with the analytical protocol such that the actual concentrations of contaminants detected in the soil gas are unknown.

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Approximately 1 ton of soil contaminated with oil and grease was removed from the property in 1993. This material was excavated from below the concrete floor in the tumbling room to facilitate building a trench for a piece of new equipment. Three soil samples were also collected from 0.45 to 1.32 feet below the concrete floor in the tumbling room in 1994. No VOCs were observed. Water quality was monitored at one of the two impacted residential wells until 1986 (at which time the home was destroyed to develop the property commercially), and at the other well until 1998. Water quality has been monitored at the second industrial facility since 1986.

Several sampling events and a geohydrologic study were conducted by EPA over 1994-1996 at the Site in an effort to determine whether significant levels of contaminant on still adjusted in the soils, sediments, surface water and ground water. The results of these sampling events led to the initiation and subsequent completion of EPA's remedial studies in 1996. EPA initiated remedial investigations at the Site in 1992 under the START initiative. EPA developed the START initiative to gather additional field data and other selected information for those NPL sites where no field studies had yet taken place. The data would be used to design technical strategies that would allow additional studies (Remedial Investigation/Feasibility Study) to be as focused as possible. Some data collection activities, namely, ground water sampling, were conducted by EPA's Alternative Remedial Contracting Strategy contractor Metcalf & Eddy. Additional soil, and surface water and sediment sampling was conducted by EPA's Office of Environmental Measurement and Evaluation. The geohydrologic study of the Site was conducted by the U.S. Geological Survey under an Interagency Agreement with EPA.

Removal Activities to Date

CTDEP entered into Consent Agreements with Cheshire Associates and North American Philips Corporation in 1984 following the identification of ground water and soil contamination by Airpax and CIDEP. Cheshire Associates agreed to remove contaminated soil and monitor the water quality at two private water supply wells on a semi-annual basis until 1983 for TCA, TCE, PCE, benzene, toluene, and meta-, ortho- and para-xylene. North American Philips Corporation agreed to test all inground fuel and/or chemical storage tanks and their associated piping to determine their structural integrity and their ability to prohibit the introduction of the tanks contents to the waters of the state. Airpax engaged the Connecticut Refining Company to test and inspect the 10,000 gallon #4 oil tank, the only in-ground tank of any nature on the property. The tank was cleaned and determined to be leak free on September 9, 1982. This tank was allegedly filled with concrete slurry at the time of conversion to natural gas around 1985.

Sealand Environmental Services, Incorporated excavated twenty cubic yards of volatile organic- and oil-contaminated soil from two areas on the property on October 19, 1983. These areas of visible soil contamination were observed during CTDEP inspection of the property in 1983. The first area was along the eastern side of the building about 25 feet south of the northeastern corner of the building, and the second was on the north side of the building about 30 feet west of the northeast corner and about 10-15 feet out perpendicular from the building. CTDEP approved the disposal of this non-hazardous waste on January 6, 1994. The material was subsequently removed from the property and disposed of at the SCA New Milford Landfill on January 25, 1984.

Cheshire Associates voluntarily arranged for bottled water to be provided to the remaining residence in 1986, and subsequently connected the home to municipal water in 1987.

B. Enforcement History

EPA has not notified parties who either owned or operated at the Site of their potential liability with respect to the Site.

III. COMMUNITY PARTICIPATION

Throughout the Site's history, community concern and involvement has been low. EPA has kept the community and other interested parties apprized of the Site activities through informational meetings, fact sheets, press releases and public meetings.

On October 10, 1996, EPA made the draft administrative record available for public review at EPA's offices in Boston and at the Cheshire Public Library in Cheshire, CT. EPA published a notice and brief analysis of the Proposed Plan in the Meriden Record Journal on October 10, 1996 and made the plan available to the public at the Cheshire Public Library.

On October 24, 1996, EPA held an information session and public meeting to discuss the results of the Remedial Investigation and to present the Agency's Proposed Plan. Also during this meeting, the Agency answered questions and accepted oral comment on the Proposed Plan from the public. From October 21 through November 20, 1996, the Agency held a 30-day public comment period to accept public comment on the proposal presented in the Proposed Plan and on any other documents previously released to the public. A transcript of this meeting is attached as Appendix D. The comments and the Agency’s response to comments are included in the responsiveness summary in Appendix E.

IV. SCOPE AND ROLE OF NO ACTION REMEDY

This Record of Decision reflects EPA's determination that no further CERCLA action is required at the Cheshire Ground Water Contamination Site. The levels of organics and metals that were detected in the soils, sediments, surface water, and ground water do not appear to pose an unacceptable risk to human health and the environment.

The decision by EPA not to pursue further action at the Site is not a determination that no action is warranted under other regulations and statutes. In addition, EPA has the authority to revisit the No Action decision even if the Site is removed from the NPL. This could occur if future conditions indicate that an unacceptable risk to human health or the environment would result from the exposure to contaminants at the Site.

V. SUMMARY OF SITE CHARACTERISTICS

The significant findings of the START Initiative and geohydrologic study are summarized below.

A. Soil

The low hill on which the Site is located is underlain by bedrock and covered by relatively thin unconsolidated glacial materials. Although the published surficial geologic map of the area shows till as the surface material at 604 West Johnson Avenue, several exposures, as well as logs of well and test borings in the area, indicate that the surficial material is fine to medium sand, silt and clay of glaciolacustrine origin. The glacial sediments range in thickness from a few feet to about 25 feet in the eastern part of the Site and are as much as 100 feet thick in the western and southern part of the area beneath the Judd Brook and Ten Mile River valleys.

EPA investigated soils throughout the 604 West Johnson Avenue property using field screening techniques and laboratory analysis of soil samples. Soil was initially collected from 20 locations around the building on the property over October 31-November 4, 1994 (Figure 3). These samples were collected from temporary wellpoints installed with hydraulic probing equipment (geoprobe), and analyzed for target VOCs, the contaminant class of concern. Samples were analyzed using a gas chromatograph equipped with a photoionization detector. Depth of sample collection ranged from 2-19 feet, and samples were presumably collected just above the bedrock based upon probe refusal. Low levels (<10 parts per billion (ppb)) of VOCs were detected from locations GP-6, GP-7, GP-8, and GP-11 near the north-northwest side of the building. Ten percent of these samples were analyzed by a contract laboratory for VOCs. No VOCs were detected in these two samples.

Based upon these results and the suspected areas of contamination, surficial (0-1 foot) and subsurface (1-3 feet and 3-5 feet) soil samples were preferentially collected from along the northern perimeter of the building over June 27-28, 1995 (Figures 4 and 5). Eleven surficial and 29 subsurficial soil samples were collected from 4 stations inside the building below the concrete floor and 11 stations outside the building. One location (SHAL11 - shallow sample from location 11) was a background location 30 feet cast of the building upgradient of any suspected contamination. These samples were analyzed for VOCs using a portable gas chromatograph. No VOCs were detected. Replicate samples were collected and analyzed at a contract laboratory for volatile and semi-volatile organic compounds, pesticides, PCBs, and metals. The majority of organic contaminants detected were pesticides at levels ranging from 3-110 ppb. The spatial

distribution of pesticides, primarily DDT, DDE and DDD, was fairly uniform outside the building. DDT, DDE and DDD were detected at the deeper depths beneath the concrete slab at concentrations ranging from 4 to 24 ppb.

Polynuclear aromatic hydrocarbons (PAHs) were detected in surface and subsurface soil samples collected from some locations onsite. Concentrations ranged from 48 to 1,900 ppb. The greatest number of PAHs were detected from two locations (SHAL09 - shallow sample from location 9 and MIDD02 - middle sample from location 2) out from the northwest corner of the building.

A wide range of metals were detected in the surface and subsurface soils on the property. Most concentrations were within an order of magnitude of the background concentrations. Most of the samples collected along the northern perimeter of the building exceeded the background selenium concentration and the typical range for selenium (Shacklette & Boergnen, 1984) in soil. The majority of these values were approximated due to limitations identified during data review. Other metals which exceeded background and the typical range included cobalt, lead, mercury and nickel. The most significant exceedance was a value for copper of 515 ppm from SHALOB (shallow sample from location B). SHALOB was collected at a depth of 10 inches below the concrete floor in the tumbling room.

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B. Ground Water

The area studied during the geohydrologic investigation extended from just north and east of 604 West Johnson Avenue southward and westward to Judd Brook and included areas of contamination at the 604 West Johnson Avenue property, the second industrial property south of 604 West Johnson Avenue, and the single-family residence. The geohydrologic characterization of the Site was based on several methods of data collection and analysis. These included an inventory of all available well and test hole data in the regional area, the installation of wells in bedrock and unconsolidated deposits, borehole-geophysical logging, aquifer tests in December 1994, May 1995, and June 15 and 16, 1995, hydrologic measurements, conceptual modeling, and water-quality sampling. The new wells were installed to obtain samples of the unconsolidated materials and bedrock, to provide sites for borehole-geophysical measurements, to provide additional water-level and water-quality measuring points, and to establish appropriate measuring points for testing of the bedrock aquifer while pumping water from the domestic well.

The quality of ground water on the 604 West Johnson Avenue property has been investigated since 1990. Ground water contamination has only been detected in the unconsolidated deposits. A ground water investigation conducted for a prospective purchaser of the property in 1990 indicated a distinct to strong petrochemical odor in wells installed in the unconsolidated deposits on the property. Analyses indicated total oil and grease contamination in the water similar to No. 2 fuel oil with higher concentrations found near the northwest corner of the building. TCA was detected from one location at a concentration of 1-9 ug/l. Ground water on the 604 West Johnson Avenue property was again sampled in 1983, 1995, 1987, and 1988 by various parties including EPA. The contaminant detected at the highest concentration was TCA. TCA was detected in 1985 at 1,100 ug/l; thereafter, concentrations of TCA ranged from 21 to 33 ug/l. Other contaminants detected included 1,1-DCA, 1,1-DCE, and PCE.

Contamination was initially documented at the abandoned domestic well in 1983. Ground water contamination has been documented at the existing domestic well since 1994. Contaminants identified included TCA, PCE, TCE, DCE, DCA, ethylbenzene, benzene, toluene, o-xylene, m-xylene, and chloroform. Prior to EPA's remedial study, the last time ground water samples were collected from this location was in August 1987. TCA, TCE, PCE chloroform and o-xylene were detected at concentrations ranging from 0.2 to 36 ug/l at that time.

Ground water sampling was conducted during remedial study at the Site in phases. During the first phase, ground water was collected from the three steel-cased monitoring wells (GW-2, GW-3, GW-5 (also identified as wells 1, 2, and 5) installed on the 604 West Johnson Avenue property in 1980, from seven temporary wellpoints, and from the domestic well (CS-221) (Figure 3). All samples were analyzed for target VOCS using a gas chromatograph equipped with a photoionization detector. Low levels (<10 ug/1) of VOCs were detected from three of the temporary wellpoint locations. Ten percent of the samples collected from the temporary wellpoints were analyzed by a contract laboratory for VOCs. 1,1-DCA was detected from wellpoint GP-20, located west off the northwest corner of the building. Analysis of those samples collected from the steel-cased monitoring wells also indicated low level VOC contamination with the exception of a sample collected from GW-3. Results of GW-3 indicated either methylene chloride or 1,1-DCE at 25 ug/l (methylene chloride and 1,1-DCE co-elute from the chromatographic column, thus a definitive identification is not possible using this field screening method). Contract laboratory

analysis of samples from each monitoring well indicated no VOCs detected with the exception of TCA at 3 ug/l from GW-3. Analysis of the sample collected from the domestic well indicated trace (<1 ppb) concentrations of TCA and 28 ug/l of either methylene chloride or 1,1-DCE. No VOCs were detected in this sample as a result of contract laboratory analysis. Federal Maximum Contaminant Levels (MCLs) for VOCs were not exceeded in any sample. Contract laboratory analysis for metals indicated that concentrations of aluminum, iron and manganese exceeded their Secondary Maximum Contaminant Level (SMCL) in some of the wells. SMCLs, based on aesthetic water quality, are set at concentrations that when exceeded do not cause human health concerns but sometimes cause the water to have an unappealing appearance or taste. Chromium was detected from GW-3 at 108 ug/l which slightly exceeded the MCL of 100 ug/l. There appears to be a correlation between the turbidity of the sample and the metals concentration. The turbidity in samples from monitoring wells GW-3 and GW-5 was greater than in other well samples. Metals results for these two samples were similarly elevated.

During the second phase, ground water samples were collected from CS-221 during an aquifer test on December 16, 1994. Seven samples were collected from the pump discharge over the 3-hour duration of the test and were analyzed on site using a portable gas chromatograph with a photoionization detector. 1,1-DCE and toluene were detected in each sample at concentrations ranging from 0.60 to 0.96 ug/l and 0.93 to 4.7 ug/l, respectively. One sample collected during the middle of the test was analyzed at the USEPA Region I laboratory using gas chromatography/mass spectroscopy. 1,1-DCF, TCA, toluene, and 1,1-DCA were detected at concentrations ranging from 0.40 to 1.4 ug/l.

During the third phase, ground water samples were collected during an aquifer testing period the week of June 13-17, 1995. Water samples were collected from GW-2, GW-3, and GW-5, from five newly installed monitoring wells at the Site, and from the CS-221 well on June 13-14, before pumping began (Figure . Two of the newly installed monitoring wells were overburden wells, SW-1 and SW-2, and three were bedrock wells TH-1, TH-2 and TH-3. (Additional samples were collected from 3 wells on the industrial property, south, including HOLO-5). Samples were analyzed using a portable gas chromatograph. Toluene and TCE were each detected from SW-1 at 0.3 ug/l and toluene was detected from GW-5 at 30 ug/l. Also, a strong petroleum odor and an oily sheen on the surface of the standing water was noted at well GW-5. (Samples were collected from the five new monitoring wells and CS221 in May 1995. Results indicated the presence of a large number of complex aromatic molecules typical of light fuel oils such as No. 2 or diesel fuel oil from wells SW-1 and SW-2). PCE and 1,1-DCE were detected at 3.9 and 0.8 ug/l, respectively, in the sample collected from HOLO-5, located on the other industrial property southwest of CS221. Two samples were collected at well TH-3 before and after the aquifer test of June 16. Two samples were also collected at well TH-2 after the aquifer test of June 15 and during the aquifer test of June 16. No VOCs were detected in the samples collected from these wells. One water sample was collected from CS-221 during the aquifer test on June 15, and three samples were collected during the aquifer test on June 16. In all four samples, 1,1-DCE was found at concentrations of 0.8 to 1.2 ug/l.

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During the fourth phase, samples were collected from each of the wells identified above and analyzed at a contract laboratory for VOCs, metals and cyanide. VOCs were detected from GW-2, GW-3 and GW-5. 1,1-DCA and 1,1,1-TCA were detected in each sample at concentrations ranging from 0.7 to 1.3 ug/1 respectively. 1,1-DCE was also detected from GW-5 at 0.7 ug/l and tetrahydrofuran was detected from GW-2 at 5.2 ug/l. TCA was detected in HOLO-5 at 0.6 ug/l and dibromochloromethane at 0.6 ug/l. No MCLs for VOCs or metals were exceeded in any sample. Aluminum and iron were detected in some wells at concentrations exceeding EPA's SMCL. More VOCs were reported for the December 1995 investigation than for the Fall 1994 investigation because the low concentration VOC method was used with quantitation limits of 1 ug/l for most compounds while the Routine Analytical Services method used in the Fall 1994 had quantitation limits of 10 ug/l. The inorganic results compared well both qualitatively and quantitatively for the two investigations.

The geohydrologic characterization of the area was based on several methods of data collection and analysis. These included an inventory of all available well and testhole data in the regional area, a geologic investigator. The installation of wells in bedrock and unconsolidated deposits, borehole-geophysical logging, a surface-geophysical survey, aquifer tests, hydrologic measurements, conceptual modeling, and water quality sampling. Water-level data indicate that there is good hydraulic connection between the unconsolidated materials and underlying fractured bedrock. Fluvial redbeds of the New Haven Arkose underlie the glacial deposits in the region; in the area of the Site, the redbeds; consist of (1) channel sandstone units, which are coarse sandstone to fine conglomerate, and (2) overbank mudstone units, which are siltstone and silty sandstone with some fine sandstone. Thin-bedded zones of siltstone that are particularly fissile are present locally within the mudstone units. Rock units strike northward and dip eastward at about 20!. The eastward-dipping strata are cut by a consistent set of west to west-northwest dipping, high-angle fractures. These fractures are oriented perpendicular to bedding and are present mostly in the channel sandstone units, but locally extend into the mudstone units as

well.

Borehole-geophysical logging indicates that ground water flows along bedding planes in fissile zones and between fissile zones in high-angle fractures. Heat-pulse flowmeter measurements and borehole fluid conductivity, and temperature logs indicate that only a small subset of the fissile zones and some high-angle fractures are hydraulically significant. Heat-pulse flowmeter measurements made under nonpumping conditions in bedrock wells at the Site indicated that there was virtually no consistent, measurable flow in the boreholes; thus, the vertical hydraulic gradient was very low in these wells. Measurements made in each well as the well was being pumped indicated that flow occurred in fissile zones and high-angle fractures. Measurements made in the domestic well as the well was being pumped indicated that all measurable flow occurred at high-angle fracture. Flow in TH-1 was associated with a highly broken (perhaps weathered) zone near the top of the well. Flow in TH-2 was associated with two fissile zones. Most of the flow entered TH-3 from a lower fissile zone. Measurements made in TH-2 and TH-3 during the June aquifer test showed that the aquifer system is formed by connected fissile zones and high-angle fractures. While the domestic well was pumped, water entered TH-2 at the upper fissile zone, flowed downward through the borehole, and flowed out at the lower fissile zone. Under the same pumping conditions, water entered TH-3 at the upper fissile zone, flowed downward through the borehole, and flowed out at the lower fissile zone. Water must enter the high-angle fracture in the area between CS221 and TH-2 and between CS221 and TH-3 where it intersects the water-bearing fissile zones present in TH-2 and TH-3. The combined fracture types form an aquifer system in which ground water follows a stair-step flowpath, flowing horizontally through fissile zones and vertically through high-angle fractures.

The short duration aquifer tests conducted at the Site indicate that there is good hydraulic connection in the fractures between the pumping domestic well and the two bedrock wells located approximately 100 feet to the north (TH-2) and south (M-3) along bedding strike. During the short duration of the aquifer tests, there was no hydraulic connection in bedrock wells located to the east (TH-1), perpendicular to the strike. A higher rate of borehole flow was observed in TH-2 than in TH-3 during the June 15-16 aquifer test. This may indicate that the hydraulic connection is better between TH-2 and CS221 than between TH-3 and CS221. A range of transmissivity of 27 to 46 square feet per day was calculated from the aquifer test data for the fractured bedrock aquifer at the pumping well (CS221) and the bedrock well to the north. Individual fracture zones identified by bore-hole logs and heat-pulse flowmeter measurements as the source of water to these wells are calculated to have hydraulic conductivities as high as 92 feet per day.

C. Ground water Flow

The natural head gradient at the Site slopes westward to southwestward. North-south-trending fractures provide preferential pathways for ground water flow. The ground water flow direction lies between the direction of the gradient and the orientation of preferred pathways. Therefore, the probable source of ground water flow to the domestic well CS221 ranges from north to cast under low pumping rate conditions (Figure 7). Low pumping rates were used in the aquifer tests and local scale model simulation and also are presumed to have wasted during the time the well was used for domestic water supply. Ground water at 604 West Johnson Avenue flows westward and discharges to the ponds located on the property. Contamination in the overburden at this Site is likely to have moved westward over time. If contamination entered fractured bedrock at this Site, it may have entered ground water that flowed to the domestic well during the time the well was in use, because fracture zones at 604 West Johnson Avenue and the residential property are connected hydraulically.

D. Surface Water

Surface water samples were collected from the two ponds located on the 604 West Johnson Avenue property on June 19, 1995. Three surface water samples were collected from the larger pond. The first was collected from the area of the discharge outfall (BG-3). A second sample was collected farther out into the pond from the initial sampling point (BG-2). A third surface water sample was collected out from the western bank halfway between the outfall and West Johnson Avenue (BG-1). The fourth surface water sample (LT-1) was collected out from the shore where a drainage culvert enters the smaller pond from the southeast. One surface water sample (RW-1) was collected from a reference pond having similar characteristics i.e., water depth, substrate, shoreline canopy and water source.

Surface water samples were analyzed for VOCs, SVOCS pesticides, metals and toxicity. One VOC was detected from BG-1, and one SVOC each was detected from BG-1 and BG-3. No pesticides or PCBs were detected in any surface water sample. Concentrations of analytes detected in aqueous samples were compared to the Ambient Water Quality Criteria (AWQC) which include values for both acute and chronic effects. AWQC were developed under the Clean Water Act Section 304 for protection of aquatic life. The acute value is expected to be fully protective for the fastest-acting toxicants and even more protective for the slower-acting toxicants. The chronic value was derived based on the shortest duration in which chronic

effects are sometimes observed for certain species and toxicants, and thus should be fully protective even for the slowest-acting toxicants.

<IMG SRC 97001H>

The aqueous sample collected from BG-3 was found to contain a concentration of copper which slightly exceeds the chronic AWQC. The chronic AWQC for copper is 16.7 ug/l; 17.2 ug/l was detected in the sample. However, this sample from BG-3 did not show the greatest toxicity response. It is most likely that the suppressed reproduction response of Ceriodaphnia dubia (freshwater invertebrate) young in the other large pond samples as compared to the reference pond was at least in part due to some uncontrolled or unmeasured factor. The survival and growth data for Pimephales promelas (freshwater fish) showed no statistically significant difference between the laboratory controls, the site reference pond and the on-site ponds.

E. Sediment

Sediment samples were co-located with the surface water samples. Sediment samples were analyzed for VOCs, SVOCs, pesticides, metals, total organic carbon, grain size, whole sediment toxicity, and acid volatile sulfide/simultaneously extracted metals (AVS/SEM). No volatile or semivolatile organic compounds were detected in any sediment sample. Concentrations of analytes detected in sediment samples were compared to the Ontario Ministry of the Environment (OMOE) Lowest Effect Levels (LELs) and Severe Effect Levels (SELs). The OMOE define the LEL as a level of contamination which has no effect on the majority of the sediment-dwelling organisms. The sediment is considered clean to marginally polluted. Sediments which contain contaminants at concentrations which exceed the LEL may require further testing. In contrast, the SEL is defined as sediment which is considered heavily polluted and likely to affect the health of sediment-dwelling organisms.

Three of the four sediment samples (LT-1, BG-1 and BG-3) were shown to contain levels of inorganics; which exceed the OMOE LELs but not the SELs. These metals include chromium, copper, iron, manganese, nickel, lead and zinc. However, the remaining sample (BG-2) exceeded the SEL for copper. Pesticides were detected in sediments from all the site ponds at levels which exceed OMOE LELs. In addition, sample LT-1 contains levels of 4,4'-DDD and 4,4'-DDE which exceeded the SEL values, after taking into account the concentration of organic carbon in the samples. The results from the sediment toxicity test indicate an impact on survival of Hyalella azteca (freshwater amphipod) at locations BG-2 and BG-3 as compared to the site reference pond. The survival data analysts for Chironomus tentans (freshwater invertebrate) showed no statistically significant difference between either the laboratory control and the on-site ponds, or the site reference pond and the onsite ponds. There was no statistically significant difference between the reference pond and the onsite pond with respect to C. tentans growth.

Review of the AVS/SEM results indicated that holding times for these samples were exceeded. Holding time refers to the period of time between the time of sample collection to time of analysis or sample preparation. Holding time is one of the criteria used to assess the validity of sample results. Two additional sediment samples were collected from the locations previously exhibiting the highest metals results. These samples were collected from BG-2 and BG-3 on July 11, 1996. Results indicated that most of the metals are tied up with sulfide, thereby precluding their availability for uptake by aquatic organisms.

VI. SUMMARY OF SITE RISKS

A Risk Assessment (RA) or Risk Screen for Human Health and an Ecological Evaluation were performed to estimate the probability and magnitude of potential adverse effects from exposure to contaminants associated with the Site.

The public health risk assessment followed a four step process: 1) contaminant identification, which identified those hazardous substances which, given the specifics of the site were of significant concern; 2) exposure assessment, which identified actual or potential exposure pathways, characterized the potentially exposed populations, and determined the extent of possible exposure; 3) toxicity assessment, which considered the types and magnitude of adverse health effects associated with exposure to hazardous substances, and 4) risk characterization, which integrated the three earlier steps to summarize the potential and actual risks posed by hazardous substances at the site, including carcinogenic and non-carcinogenic risks. The results of the public health risk assessment and risk screen for the Cheshire Ground Water Contamination Site are discussed below, followed by the conclusions of the ecological risk evaluation.

Thirty-nine contaminants of concern, listed in Tables 1 and 2 of this Record of Decision, were selected for evaluation in the Human Health Risk Assessment. These contaminants constitute a representative

subset of all contaminants identified at the Site during the remedial study. The thirty-nine contaminants of concern were selected to represent potential site related hazards based on toxicity, concentration, frequency of detection, and mobility and persistence in the environment. A summary of the health effects of each of the contaminants of concern can be found in Appendix B.

TABLE 1: SUMMARY OF CONTAMINANT'S OF CONCERN IN (GROUND WATER)

Contaminants of Concern	Maximum Concentration ug/l	Frequency of Detection
1,1-dichloroethane	14	6/21
tetrabydrofuran	5.2	1/21
1,1-dichloroethylene	0.9	3/21
1,1,1-trichloroethane	3	6/21
bromodichloromethane	0.6	1/21
1,3-dichlorobenzene	1	1/21
dibromochloromethane	0.6	2/21
toluene	1.4	1/21
bis(2-ethylhexyl)phthalate	15	1/4
arsenic	25.6	3/16
chromium	108	3/16
copper	25.5	2/16
lead	3.1	9/16
manganese	186	11/16
nickel	82.9	8/16

TABLE 2: SUMMARY OF CONTAMINANTS OF CONCERN IN (SOILS)

Contaminants of Concern	Maximum Concentration (mk/kg)	Frequency of Detection
arsenic	3.80	11/11
barium	80.10	11/11
beryllium	0.71	8/11
cadmium	1.00	1/11
chromium	12.40	11/11
mercury	0.19	1/11
nickel	14.40	8/11
phenanthrene	0.81	1/11
anthracene	0.12	1/11
fluoranthene	1.90	1/11
pyrene	1.20	2/11
benzo(g,h,i)perylene	4.80	1/11
benz(a)anthracene	0.58	1/11
benz(b)fluoranthene	1.00	1/11
benzo(a)pyrene	0.82	1/11
benzo(k)fluoranthene	0.82	1/11
chrysene	0.87	2/11
indeno(1,2,3-cd)pyrene	0.43	1/11
pentachlorophenol	0.054	1/11
isophorone	1.7	3/11
chlordane-alpha	0.006	1/11
dieldrin	0.052	2/11
DDD	0.11	3/11
DDE	0.08	4/11
DDT	0.11	7/11
endosulfan sulfate	0.004	1/11

Potential human health effects associated with exposure to the contaminants of concern were estimated quantitatively or qualitatively through the development of several hypothetical exposure pathways. These pathways were developed to reflect the potential for exposure sure to hazardous substances based on the present uses, potential future uses, and location of the Site. The Cheshire Ground Water Contamination Site is currently occupied by a manufacturer of semi-conductor and parts for semi-conductors. Future industrial land use at the 604 West Johnson Avenue property is a reasonable assumption because of its current zoning and location to major highways. A single-family residence is located to the south across West Johnson Avenue. A manufacturer of medical needles is located south of the residence. The Site is located within the Cheshire industrial area. The area surrounding the Site is primarily commercial and industrial with some residential properties located to the east. The following is a brief summary of the exposure pathways evaluated.

Ground water

No current exposure to ground water exists because the ground water at the Site is not used for drinking water. Therefore, this pathway was not evaluated. Future use of the contaminated ground water for residential drinking water was assumed. Residents were assumed to consume 2 liters per day of ground water having contaminant levels equivalent to the maximum detected concentrations for 350 days per year over 30 years. Because contaminant levels are low, only the Reasonable Maximum Exposure (RME) scenario was quantitatively evaluated as a conservative approach.

Soils

Current potential exposures, which may include workers and trespassers, were not quantitatively evaluated because contaminant levels are low and a future residential scenario was evaluated as a conservative screen. Future residential land use was assumed as a conservative screen of potential risks via exposure to surface soils. Less conservative scenarios, such as worker and trespasser exposure, may be more appropriate, but because risks from the conservative scenario are low, a quantitative assessment of risks was determined to be unnecessary. Exposure was assumed to occur via incidental ingestion of soils and inhalation of airborne contaminants over a 30 year exposure period.

Excess lifetime cancer risks were determined for each exposure pathway by multiplying the exposure level with the chemical specific cancer factor. Cancer potency factors have been developed by EPA from epidemiological or animal studies to reflect a conservative, "upper bound" of the risk posed by potentially carcinogenic compounds. That is, the true risk is unlikely to be greater than the risk predicted. The resulting risk estimates are expressed in scientific notation as a probability (e.g. 1 x 10 -6 for 1/1,000,000) and indicate (using this example), that an average individual is not likely to have greater that a one in a million chance of developing cancer over 70 years as a result of site-related exposure as defined to the compound at the stated concentration. Current EPA practice considers carcinogenic risks to be additive when assessing exposure to a mixture of hazard substances.

The hazard index was also calculated for each pathway as EPXs measure of the potential for non-carcinogenic health effects. A hazard quotient is calculated by dividing the exposure level by the reference dose (RfD) or other suitable benchmark for non-carcinogenic health effects for an individual compound. Reference doses have been developed by EPA to protect sensitive individuals over the course of a lifetime and they reflect a daily exposure level that is likely to be without an appreciable risk of an adverse health effect. RfDs are derived from epidemiological or animal studies and incorporate uncertainty factors to help ensure that adverse health effects will not occur. The hazard quotient is often expressed as a single value (e.g. 0.3) indicating the ratio of the stated exposure as defined to the reference dose value (in this example, the exposure as characterized is approximately one third of an acceptable exposure level for the given compound). The hazard quotient is only considered additive for compounds that have the same or similar toxic endpoint and the sum is referred to as the hazard index (HI). (For example: the hazard quotient for a compound known to produce liver damage should not be added to a second whose toxic endpoint is kidney damage).

Table 3 depicts the carcinogenic risk summary for the contaminants of concern in ground water evaluated to reflect potential future ingestion of ground water corresponding to the reasonable maximum exposure (RME) scenario. Only those contaminants for which the RME risk estimate is greater than 1 x 10 -6 is shown in the summary below. Estimated risks for all contaminants are presented in the Risk Assessment.

Table 3

CARCINOGENIC RISKS FOR THE POSSIBLE FUTURE INGESTION OF Ground water

Contaminant of Concern (class)	Concentration (ug/l) MAX	Exposure Factor (1/kg/day)	Cancer Potency Factor (mg/kg/day)-l	Risk Estimate RME
1,1-dichloroethylene	0.9	0.011	0.6	6 x 10-6
bromodichloromethane	0.6	0.011	0.062	5.7 x 10-7
dibromochloromethane	0.6	0.011	0.084	6 x 10-7
bis(2-ethyl hexyl)phthalate	15	0.011	0.014	2.3 x 10-6
arsenic (A)	25.6	0.011	1.5	4.3 x 10-4
			sum	4.3 X 10-4

Table 4 depicts the non-carcinogenic risk summary for the contaminants of concern in ground water evaluated to reflect potential future ingestion of ground water corresponding to the reasonable maximum exposure (RME) scenario. Only those contaminants for which the Hazard Quotient is 0.1 or greater are presented below. Hazard Quotients for all contaminants can be found in the Risk Assessment.

Table 4

NON-CARCINOGENIC RISKS FOR THE POSSIBLE FUTURE INGESTION OF Ground water

Contaminant (class)	Concentration (ug/1) max	Exposure Factor (1/kg/day)	Reference Dose (mg/kg/day)	Target Endpoint of Toxicity	Hazard Quotient RME
arsenic	25.6	0.027	0.0003	Skin	2.3
chromium	108	0.027	0.005	Not observed	0.6
manganese	186	0.027	0.024	Central Nerv. Syst.	0.36
nickel	82.9	0.027	0.02	Decr. Body wgt.	0.1
			HI skin	2.3	
			HI liver	Less than one	
			HI kidney	Less than one	
			HI body wgt	Less than one	
			HI cent. ner.	Less than one	

Table 5 depicts the carcinogenic risk summary for the contaminants of concern in soil evaluated to reflect potential future exposure from incidental ingestion of soils and inhalation of airborne contaminants corresponding to the reasonable maximum exposure (RME) scenario. Only those contaminants for which the RME risk estimate is greater than 1 x 10-6 is shown in the summary below. Estimated risks for all contaminants are presented in the Risk Assessment.

Table 5

CARCINOGENIC RISKS FOR THE FUTURE INGESTION AND INHALATION OF SOILS

Contaminant (class)	Concentration (mg/kg) max	Exposure Factor* (day)	cancer Potency Factor (mg/kg/day)-l	Risk Est. RME
arsenic(A)	3.80	5.3 x 10-7	1.5	3 x 10-6
beryllium(B2)	0.71	5.3 x 10-7	4.3	2 x 10-6
benzo(a)pyrene (B2)	0.82	5.3 x 10-7	7.3	4 x 10-6
			sum	9 x 10-6

Risks associated with the inhalation pathway are negligible and for simplicity are not presented here.

Noncarcinogenic risks for contaminants in soils are all well below a Hazard Quotient of 0.1 for each chemical and, therefore, are not presented here. The individual HQs are presented in the Risk Assessment.

Summary of Risks

Ground Water

The carcinogenic risk associated with a future potential RME scenario is 4.3 x 10. This risk is attributable to one contaminant, arsenic. The risk attributable to other compounds is at or below the lower end of the acceptable risk range (i.e., 10 -6). Although the risk associated with arsenic is at the upper end of the acceptable risk range (i.e., 10 -4), the contaminant level is below the level established as safe in the Safe Drinking Water Act.

The total Hazard Index is 3.3. The majority of the risk is attributable to arsenic (Hazard Quotient of 2.3) which again, is present at half the level established as safe in the Safe Drinking Water Act and is, therefore, already below the cleanup level. No other contaminant has a Hazard Quotient above one.

Soil

The carcinogenic risk associated with a future potential RME scenario is 9 x 10 -6. Arsenic, beryllium and benzo(a)pyrene contribute to this risk. The total Hazard Index is well below one.

The risk assessment for soils at this site was done using default parameters for a residential scenario in EPA's Risk Assistant software as a conservative screen. The default parameters and scenarios used for assessing risk from contaminated soils may be more conservative than would be used in an assessment tailored for this site. For example, an analysis of future land use may show worker exposure to be more appropriate than residential exposure and the days per year of assumed exposure nay be somewhat lower. Trespassing is a valid scenario regardless of land use, risks from this scenario would be lower than for residential exposure. Because the more conservative residential exposure scenario did not show a risk outside the acceptable range, risks via trespassing were not quantified.

Surface water and Sediment

Surface water and sediment are not significant exposure media with respect to human health at this site and, therefore, risks were not calculated. A screening approach was used to make this determination as described below.

The screening approach used for surface water was a comparison to the levels considered as safe in the Safe Drinking Water Act or, in their absence, to risk-bated concentrations. This is a very conservative screen because the assumed potential future exposure is to children who may infrequently trespass and wade in the pond and have skin contact with contaminants. The screening approach used for pond sediments was a comparison of sediment contaminant concentrations to risk-based concentrations. This approach is also very conservative because exposure to the pond sediments was assumed to occur through infrequent trespassing by children.

The Ecological Evaluation consisted of a comparison of the data collected to specific surface water and sediment criteria and guidelines. In addition, contaminant were compared to the laboratory toxicity test results. Conclusions were drawn with respect to the potential for ecological risk to aquatic and benthic receptors.

Surface Water

Concentrations of analytes; detected in aqueous samples were compared to the Ambient Water Quality Criteria(AWQC) which include values for both acute and chronic effects. The acute AWQC, otherwise known as the Criteria Maximum Concentration (CVC), is the EPA national water quality criteria recommendation for the highest instream concentration of a toxicant or an effluent to which organisms can be exposed for a brief period of time without causing an acute effect (lethality). The chronic AWQC or the Criteria Continuous Concentration (CCC) is the EPA national water quality criteria recommendation for the highest instream concentration of a toxicant or an effluent to which organism can be exposed indefinitely without causing unacceptable effects (e.g. decrease in survival, growth or reproduction). AWQC were developed to provide protection for a majority of biota. The acute value is expected to be fully protective for the fastest-acting toxicants and even more protective for the slower-acting toxicants. The chronic value was derived based on the shortest duration in which chronic effects are sometimes observed for certain species and toxicants, and thus should be fully protective even for the slowest-acting toxicants.

From all samples except for BG-3, the only chronic criteria which may have been exceeded were those for which the reporting limits were greater than the criteria values. These metals are silver, cadmium, copper, lead, antimony, selenium and thallium. No direct comparisons can be made due to the uncertainty of the actual concentrations in the water samples. Similar concentrations were detected in the reference and site ponds, possibly indicating that these concentrations are indicative of regional levels. Since the actual concentration in the field samples may or may not exceed the criteria, this data should be used with caution. The remaining sample (BG-3), collected from the large pond, was found to contain concentration of copper which slightly exceeds the chronic AWQC, with the concentration being above the lab's reporting limits. The chronic AWQC (taking into account the sample-specific hardness of 150 mg/l) for copper is 16.7 ug/l; 17.2 ug/l was detected in the sample.

Results of the surface water toxicity tests indicated a statistically significant difference in the number of C. dubia neonates (young) produced in the three samples from the large site pond (BG-1, BG-2, BG-3) as compared to the reference pond. This, however, does not indicate that the decrease in neonate production is biologically significant since the average number of young in those samples exceeds the minimum test acceptability of an average of 15 or more young in the control samples (EPA 1989). In addition, percent survival in all samples was > 80 %. Although all of the samples contained concentrations of metals which may be above the AWQC, only one sample (BG-3) contained concentrations of any metal (copper at 17.2 Ig/L) which was both above the labs reporting limit and in exceedance of the chronic AWQC. This sample also contained 8 Ig/L of 4-methylphenol. However, among the three samples from the large site pond, BG-3 did not show the greatest toxicity response. It is most likely that the suppressed reproduction response in these three samples was at least in part due to some uncontrolled or unmeasured factor.

The survival and growth data for P. promelas showed no significant difference between the laboratory controls, the site reference pond and the on-site ponds.

Sediment

Site-related sediment chemistry was compared to the Ontario Ministry of the Environment (OMOE) Lowest Effect Levels (LEL) and Severe Effect Levels (SEL) (Persaud 1992). The OMOE define the LEL as a level of contamination which has no effect on the majority of the sediment-dwelling organisms. The sediment is considered clean to marginally polluted. Sediments which contain contaminants at concentrations which exceed the LEL may require further testing. In contrast, the SEL is defined as sediment which is considered heavily polluted and likely to affect the health of sediment-dwelling organisms.

As with the surface water analytical data, some detection limits were higher than some of the sediment quality guidelines, making interpretation uncertain. The chemical concentrations associated with the reference pond sediments were lower than for the site ponds, showing possible exceedances of guideline concentrations for only three (arsenic, cadmium, nickel) of the twenty target inorganics. Only nickel was detected above the reporting limit. No direct comparisons can be made using the values for arsenic and cadmium due to the uncertainty of these values. No organic compounds were detected in this sediment.

Three of the four site samples (LT-1, BG-1 and BG-3) were shown to contain levels of inorganics which exceed the OMOE LELs, but not the SELs. These metals include chromium, copper, iron, manganese, nickel, lead and zinc. However, the remaining site sample (BG-2) exceeded the SEL for copper. In addition, these samples may contain concentrations of arsenic and cadmium which exceeded the LELs, however, due to

the high reporting limits achieved by the lab for these analytes, direct comparisons can not be made. Pesticides were detected in sediments from all of the site ponds at levels which exceed OMOE LELs. In addition, sample LT-1 contains levels of 4,4'-DDD and 4,4'-DDE which exceeded the SEL values, after taking into account the concentration of organic carbon in the samples (average total organic carbon for LT-1 = 4.3%).

The results from the sediment toxicity test indicate an impact on survival of H. azteca at locations BG-2 and BG-3, as compared to the site reference pond. It should be noted that one of the laboratory controls, Saw Mill Brook, had a percent survival which was less than these two sites. Chemical analyses of these sediment samples indicated elevated levels of copper, 119 mg/Kg and 95.6 mg/Kg respectively; the level of copper in BG-2 exceeded the OMOE SEL of 110 mg/Kg. In addition, these samples contained detectable levels of some pesticides; however, in concentrations not as high as that found in sample LT-1 where no significant mortality to H. azteca was observed.

The survival data analysis for C. tentans showed no statistically significant difference between either the laboratory control and the on-site ponds, or the site reference pond and the on-site ponds, implying no adverse effect on survival. Analyses of growth data indicate a significant difference between the laboratory control (artificial sediment) and the site reference and all on-site locations except BG-3. However, when a comparison is made between the reference pond and on-site ponds there is no significant difference with respect to C. tentans growth.

Summary of Conclusions Concerning Site Risks

The only samples which showed concentrations of chemical contaminants which were both above the labs reporting limits and in exceedance of documented criteria were the sediment samples LT-1 (4,4'-DDD and 4,4'-DDE) and BG-2 (copper) and the water column sample, BG-3 (copper). Of these samples, only LT-1 could not be correlated to any adverse effect demonstrated via laboratory toxicity tests. In addition, surface water samples BG-1 and BG-2 did not contain significantly high levels of chemical contamination, but were found to cause a significant effect on the survival of H. azteca. The significant mortality in these two samples, is not believed to be due to inorganic contamination because the AVS/SEM analysis showed the metals are not available to sediment dwelling organisms. The pesticides are likely attributable to the former use of the property from agricultural purposes.

The Site specific conditions at the Cheshire Ground Water Contamination Site support the decision to take no further action. There are very low levels of contaminants in the media sampled at the Site. All of the estimated maximum cancer risks to human health associated with exposure to contamination at the Site fall within EPA's acceptable risk range. In addition, the human health risk assessment concluded that non-cancer adverse health effects were not likely at this Site because the level of arsenic is present at half the level established as safe in the Safe Drinking Water Act.

Results also indicated that aquatic organisms would not be harmed should they contact the contaminated surface water or sediments. This conclusion is based on the fact that the copper is not bioavailable to the organisms and other effects seen are believed to be localized and not likely to result in adverse effects to the community of organisms.

VII. DESCRIPTION OF NO ACTION ALTERNATIVE

There are no construction activities associated with the No Action decision.

VIII. DOCUMENTATION OF SIGNIFICANT CHANGES

EPA presented a Proposed Plan (preferred alternative) on October 24, 1996 for the Site based on the results of both the human health risk assessment and ecological risk evaluation performed as part of the remedial study. The Proposed Plan described EPA's proposal to take no further action at the Cheshire Ground Water Contamination Site. No significant changes have been made to the No Action recommendation described in the Proposed Plan.

IX. STATE ROLE

The Connecticut Department of Environmental Protection has reviewed the preferred alternative and has indicated its support for the No Action decision. The State of Connecticut concurs with the selected remedy for the Cheshire Ground Water Contamination Site. A copy of the declaration of concurrence is attached as Appendix C.

APPENDIX A

ADMINISTRATIVE RECORD INDEX 01/02/97
CHESHIRE GROUNDWATER CONTAMINATION Page 1
All Operable Units

01.02 PRE-REMEDIAL RECORDS - PRELIMINARY ASSESSMENT

Title: Letter Report: Preliminary Assessment of Cheshire Associates Property, Cheshire, CT.
Addressee: DON SMITH.9 - EPA REGION 1
Authors: BARBARA FELITTI - NUS CORPORATION
Date: September 20, 1985
Format: LETTER No. Pgs: 7
AR No. 01.02.1 Document No. 000001

01.03 PRE-REMEDIAL RECORDS - SITE INSPECTION

Title: Memo Concerning Cheshire Associates Property Final Site Inspection Report, with Appendices.
Addressee: DON SMITH - EPA REGION 1
Authors: BARBARA FELITTI - NUS CORPORATION
Date: July 7, 1986
Format: MEMORANDUM No. Pgs: 73
AR No. 01.03.1 Document No. 000002

03.01 REMEDIAL INVESTIGATION - CORRESPONDENCE

Title: Letter Concerning Results of Recent Test of Residential Water.
Addressee: DOREEN FUSCO
Authors: TIMOTHY R. CARMODY - CARMODY & TORRANCE
Date: June 26, 1986
Format: LETTER No. Pgs: 3
AR No. 03.01.1 Document No. 000034

Title: Letter Concerning Report on Residential Well Sampling.
Addressee: DOREEN FUSCO
Authors: TIMOTHY R. CARMODY - CARMODY & TORRANCE
Date: July 18, 1986
Format: LETTER No. Pgs: 2
AR No. 03.01.2 Document No. 000037

Title: Correspondence Concerning Property at 657 West Johnson Avenue.
Addressee: JANE DOLAN - EPA REGION 1
Authors: JOSEPH A. WELLINGTON - CARMODY & TORRANCE
Date: October 25, 1994
Format: LETTER No. Pgs: 52
AR No. 03.01.3 Document No. 000086

Title: Letter Concerning Results of Residential Groundwater Samples.
Addressee: DOREEN FUSCO
Authors: JANE DOLAN - EPA REGION 1
Date: February 1, 1995
Format: LETTER No. Pgs: 1
AR No. 03.01.4 Document No. 000073

Title: Letter Concerning Results of Water Sampling at Erikson Metals Corp.
Addressee: SARAH DUBOIS - ERICKSON METALS
Authors: JANE DOLAN - EPA REGION 1
Date: February 1, 1995
Format: LETTER No. Pgs: 1
AR No. 03.01.5 Document No. 000074

Title: Memorandum: Cheshire Groundwater Contamination Site Request for Air Modeling.
Addressee: KIMBERLY N. TISA - EPA REGION 1
Authors: JANE DOLAN - EPA REGION 1
Date: May 19, 1995
Format: MEMORANDUM No. Pgs: 1
AR No. 03.01.6 Document No. 000008

Title: Letter Concerning Water Level Monitoring During Pilot-scale Remediation.
Addressee: JANE DOLAN - EPA REGION 1
Authors: J. JEFFREY STARN - U.S.GEOLOGICAL SURVEY
Date: September 12, 1996
Format: LETTER No. Pgs: 6
AR No. 03.01.7 Document No. 000053

03.02 REMEDIAL INVESTIGATION - SAMPLING AND ANALYSIS DATA

Title: Letter Report Concerning Soil Vapor Survey Results.
Addressee: FRANK J. GULISANO - LEMBO FEINERMAN CHESHIRE TRUST
Authors: KELLY L. MELOY, DENNIS WASLENCHUK - HALEY & ALDRICH, INC.
Date: February 28, 1991
Format: REPORT, STUDY No. Pgs: 17
AR No. 03.02.1 Document No. 000015

Title: Environmental Site Assessment for the Holgrath Corporation.
Addressee: HOLGRATH CORP
Authors: HALEY & ALDRICH
Date: January 1993
Format: REPORT, STUDY No. Pgs: 102
AR No. 03.02.2 Document No. 000016

Title: Groundwater Investigation Report.
Authors: METCALF & EDDY
Date: 1994
Format: REPORT, STUDY
AR No. 03.02.3 Document No. 000077

Title: Letter with Enclosed Results of Laboratory Analysis of Soil Samples.
Addressee: WAYNE CURRY - PHILIPS TECHNOLOGIES
Authors: SUSAN A. STRAND - EEW MANAGEMENT, INC.
Date: March 14, 1994
Format: LETTER No. Pgs: 12
AR No. 03.02.4 Document No. 000017

Title: Memorandum: Cheshire, CT - Groundwater - 657 West Johnson Avenue - Field VOA Results.
Addressee: JANE DOLAN - EPA REGION 1
Authors: SCOTT CLIFFORD - EPA REGION 1
Date: December 29, 1994
Format: REPORT, STUDY No. Pgs: 11
AR No. 03.02.5 Document No. 000075

Title: Fax Copy of Sampling Data.
Addressee: JANE DOLAN - EPA REGION 1
Authors: T.M. SPITTLER
Date: May 10, 1995
Format: MISCELLANEOUS No. Pgs: 10
AR No. 03.02.6 Document No. 000018

Title: Letter Containing Review of Soil Gas Data for Indoor Air Modeling.
Addressee: KIMBERLY N. TISA - EPA REGION 1
Authors: WAYNE WESTBROOK - PACIFIC ENVIRONMENTAL SERVICES, INC
Date: June 12, 1995
Format: LETTER No. Pgs: 2
AR No. 03.02.7 Document No. 000019

Title: Memorandum: Cheshire, CT - Groundwater - Field VOA Results.
Addressee: JANE DOLAN - EPA REGION 1
Authors: SCOTT CLIFFORD - EPA REGION 1
Date: June 20, 1995
Format: REPORT, STUDY No. Pgs: 5
AR No. 03.02.8 Document No. 000076

Title: Memorandum: Cheshire, CT - Soils - Field VOA Results.
Addressee: JOHN TIMONY - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: SCOTT CLIFFORD - EPA ENVIRONMENTAL SERVICES DIVISION
Date: July 6, 1995
Format: MEMORANDUM No. Pgs: 4
AR No. 03.02.9 Document No. 000055

Title: Memorandum: Analysis of Chlorinated Pesticides and PCBs in Aqueous Samples – Cheshire Association Wells.
Addressee: DANIEL S. GRANZ - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: PETER PHILBROOK - EPA ENVIRONMENTAL SERVICES DIVISION
Date: July 14, 1995
Format: MEMORANDUM No. Pgs: 15
AR No. 03.02.10 Document No. 000062

Title: Memorandum: Cheshire Results
Addressee: DANIEL S. GRANZ - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: MICHAEL DOWLING, SCOTT CLIFFORD - EPA ENVIRONMENTAL SERVICES DIVISION
Date: July 19, 1995
Format: MEMORANDUM No. Pgs: 10
AR No. 03.02.11 Document No. 000063

Title: Memorandum: Gas Chromotography-Mass Spectrometry Analysis of Extractable Organics in Soils and Sediments.
Addressee: DANIEL S. GRANZ - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: AGNES VANLANGENHOVE - EPA ENVIRONMENTAL SERVICES DIVISION
Date: July 19, 1995
Format: MEMORANDUM No. Pgs: 25
AR No. 03.02.12 Document No. 000064

Title: Memorandum: Gas Chromotography-Mass Spectrometry Analysis of Extractable Organics in Aqueous Samples.
Addressee: DANIEL S. GRANZ - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: AGNES VANLANGENHOVE - EPA ENVIRONMENTAL SERVICES DIVISION
Date: July 20, 1995
Format: MEMORANDUM No. Pgs: 25
AR No. 03.02.13 Document No. 000065

Title: Letter Concerning Surface Water/Sediment Sampling Results.
Addressee: ANTHONY PALERMO - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: DAVID F. MCDONALD - LOCKHEED ENVIRONMENTAL SYSTEMS & TECH
Date: July 24, 1995
Format: MEMORANDUM No. Pgs: 50
AR No. 03.02.14 Document No. 000056

Title: Memorandum: Analysis of Chlorinated Pesticides and Polychlorinated Biphenyls (PCBs) in Soil Samples - Cheshire Association Wells.
Addressee: DANIEL S. GRANZ - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: PETER PHILBROOK - EPA ENVIRONMENTAL SERVICES DIVISION
Date: July 24, 1995
Format: MEMORANDUM No. Pgs: 13
AR No. 03.02.15 Document No. 000066

Title: Memorandum: Cheshire Site, Cheshire, CT Volatile Organic Analysis by GC/MS
Addressee: JOHN TIMONY - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: SURESH SRIVATAVA - EPA ENVIRONMENTAL SERVICES DIVISION
Date: August 22, 1995
Format: MEMORANDUM No. Pgs: 19
AR No. 03.02.16 Document No. 000067

Title: Memorandum: Cheshire Site, Cheshire, CT Soil -- Purgeable Organic Analysis by GC/MS.
Addressee: JOHN TIMONY - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: SURESH SRIVATAVA - EPA ENVIRONMENTAL SERVICES DIVISION
Date: August 22, 1995
Format: MEMORANDUM No. Pgs: 14
AR No. 03.02.17 Document No. 000068

Title: Analysis of Water/Sediment for Total organic Carbon - Table of Results.
Authors: NATHAN RAINES, JACK PAAR - EPA ENVIRONMENTAL SERVICES DIVISION
Date: August 28, 1995
Format: MISCELLANEOUS No. Pgs: 1
AR No. 03.02.18 Document No. 000057

Title: Memorandum: Cheshire Groundwater Contamination Site Soil Data.
Addressee: JANE DOLAN - EPA NEW-ENGLAND
Authors: DANIEL S. GRANZ - EPA ENVIRONMENTAL SERVICES DIVISION
Date: September 12, 1995
Format: MEMORANDUM No. Pgs: 45
AR No. 03.02.19 Document No. 000054

Title: Groundwater Investigation Trip Report
Authors: METCALF & EDDY
Date: December 1995
Format: REPORT, STUDY
AR No. 03.02.20 Document No. 000078

Title: Geohydrology and Conceptual Model of a Groundwater Flow System Near a Superfund Site in Cheshire Connecticut.
Addressee: EPA REGION 1
Authors: JANET STONE, PAUL M. BARLOW, J. JEFFREY STARN - U.S. GEOLOGICAL SURVEY
Date: 1996
Format: REPORT, STUDY No. Pgs: 96
AR No. 03.02.21 Document No. 000022

Title: Memorandum: Cheshire - AVS/SEM Results
Addressee: JANE DOLAN - EPA NEW-ENGLAND
Authors: MICHAEL DOWLING, SCOTT CLIFFORD, KATHY POLGAR, BILL ANDRADE - EPA ENVIRONMENTAL SERVICES DIVISION
Date: March 5, 1996
Format: MEMORANDUM No. Pgs: 6
AR No. 03.02.22 Document No. 000058

Title: Memorandum: Quality Assurance Review: Evaluation of AVS/SEM Methods and Summary Data for Cheshire Associates, Cheshire, CT.
Addressee: JANE DOLAN - EPA REGION 1
Authors: ANDY BELIVEAU - EPA ENVIRONMENTAL SERVICES DIVISION
Date: April 16, 1996
Format: MEMORANDUM No. Pgs: 2
AR No. 03.02.23 Document No. 000009

Title: Memorandum: Cheshire - Total Metals Results in Sediment.
Addressee: JUSTIN PIMPARE - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: SCOTT CLIFFORD - EPA ENVIRONMENTAL SERVICES DIVISION
Date: July 25, 1996
Format: MEMORANDUM No. Pgs: 6
AR No. 03.02.24 Document No. 000060
*Attached to Document No. 000059 In 03.02

Title: Memorandum: Cheshire - AVS/SEM Results
Addressee: DANIEL S. GRANZ - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: BILL ANDRADE, SCOTT CLIFFORD - EPA ENVIRONMENTAL SERVICES DIVISION
Date: August 1, 1996
Format: MEMORANDUM No. Pgs: 6
AR No. 03.02.25 Document No. 000061

Title: Memorandum: Cheshire Sediment Sampling
Addressee: JANE DOLAN - EPA NEW-ENGLAND
Authors: JUSTIN PIMPARE - EPA ENVIRONMENTAL SERVICES DIVISION
Date: August 12, 1996
Format: MEMORANDUM No. Pgs: 1
AR No. 03.02.26 Document No. 000059

3.07 REMEDIAL INVESTIGATION - WORK PLANS AND PROGRESS REPORTS

Title: Plan for Hydrogeologic Study of Two Contaminated Groundwater Sites, Cheshire, Connecticut.
Authors: USGS
Date: September 23, 1994
Format: REPORT, STUDY No. Pgs: 31
AR No. 03.07.1 Document No. 000003

Title: Quality Assurance Plan Short Form.
Addressee: MARTHA ZIRBEL - METCALF & EDDY
Authors: JANE DOLAN - EPA REGION 1
Date: October 24, 1994
Format: WORK PLAN No. Pgs: 74
AR No. 03.07.2 Document No. 000004

Title: Surface Water and Sediment Field Sampling Plan.
Addressee: ANTHONY PALERMO - EPA ENVIRONMENTAL SERVICES DIVISION
Authors: DAVID F. MCDONALD - L0CKHEED ENVIRONMENTAL SYSTEMS & TECH
Date: June 8, 1995
Format: WORK PLAN No. Pgs: 7
AR No. 03.07.3 Document No. 000005

Title: Work/QA Plan Short Form: Cheshire Groundwater Contamination Site Soil Sampling.
Addressee: CHARLES PORFERT - EPA REGION 1
Authors: JANE DOLAN - EPA REGION 1
Date: June 26, 1995
Format: WORK PLAN No. Pgs: 7
AR No. 03.07.4 Document No. 000006

Title: Quality Assurance Plan Addendum: Cheshire Groundwater Contamination Superfund Site.
Authors: JANE DOLAN - EPA REGION 1
Date: November 27, 1995
Format: WORK PLAN No. Pgs: 63
AR No. 03.07.5 Document No. 000007

Title: Work Plan/QA Plan Short Form - Cheshire Superfund Site Sediment Sampling.
Addressee: JANE DOLAN - EPA NEW-ENGLAND
Authors: ANDY BELIVEAU - EPA NEW-ENGLAND
Date: July 10, 1996
Format: WORK PLAN No. Pgs: 4
AR No. 03.07.6 Document No. 000069

03.09 REMEDIAL INVESTIGATION - HEALTH ASSESSMENTS

Title: Preliminary Health Assessment for Cheshire Associates Site.
Authors: ATSDR
Date: June 25, 1990
Format: REPORT, STUDY No. Pgs: 14
AR No. 03.09.1 Document No. 000014

Title: Health Consultation by CT Department of Public Health in Conjunction with ATSDR.
Addressee: LOUISE HOUSE
Authors: CT DEPT OF HEALTH SERVICES
Date: October 11, 1996
Format: REPORT, STUDY No. Pgs: 8
AR No. 03.09.2 Document No. 000102

03.10 REMEDIAL INVESTIGATION - ENDANGERMENT ASSESSMENTS

Title: Memorandum: Preliminary Evaluation of Ecological Risk at Cheshire Associates, Cheshire, CT.
Addressee: JANE DOLAN - EPA REGION 1
Authors: PATTI TYLER - EPA ENVIRONMENTAL SERVICES DIVISION
Date: November 4, 1995
Format: MEMORANDUM No. Pgs: 10
AR No. 03.10.1 Document No. 000010

Title: Memorandum: Risk Assessment for Cheshire Soils
Addressee: JANE DOLAN - EPA NEW-ENGLAND
Authors: MARGARET MCDONOUGH - EPA NEW-ENGLAND
Date: March 14, 1996
Format: MEMORANDUM No. Pgs: 18
AR No. 03.10.2 Document No. 000070

Title: Memorandum: Risk Assessment for Cheshire Sediment and Surface Water.
Addressee: JANE DOLAN - EPA NEW-ENGLAND
Authors: MARGARET MCDONOUGH - EPA NEW-ENGLAND
Date: September 12, 1996
Format: MEMORANDUM No. Pgs: 3
AR No. 03.10.3 Document No. 000071

Title: Memorandum: Cheshire Groundwater Risk Assessment.
Addressee: JANE DOLAN - EPA REGION 1
Authors: MARGARET MCDONOUGH - EPA REGION 1
Date: September 24, 1996
Format: MEMORANDUM No. Pgs: 9
AR No. 03.10.4 Document No. 000079

04.09 FEASIBILITY STUDY - PROPOSED PLANS FOR SELECTED REMEDIAL ACTION

Title: Proposed Plan for Cheshire Groundwater Contamination Superfund Site.
Authors: EPA REGION 1
Date: October 1996
Format: FACT SHEET, PRESS RELEASE No. Pgs: 11
AR No. 04.09.1 Document No. 000090

05.03 RECORD OF DECISION - RESPONSIVENESS SUMMARIES

Title: Responsiveness Summary.
Authors: EPA NEW-ENGLAND
Date: December 1996
Format: MISCELLANEOUS No. Pgs: 13
AR No. 05.03.1 Document No. 000104

05.04 RECORD OF DECISION - RECORD OF DECISION

Title: Record of Decision for Cheshire Groundwater Contamination Site.
Authors: LINDA M. MURPHY - EPA NEW-ENGLAND
Date: December 31, 1996
Format: REPORT, STUDY
AR No. 05.04.1 Document No. 000105

09.01 STATE COORDINATION - CORRESPONDENCE

Title: Letter Concerning the Proposed Plan, Cheshire Groundwater Contamination Area Superfund Site.
Addressee: JANE DOLAN - EPA NEW-ENGLAND
Authors: SHEILA GLEASON - CONNECTICUT DEPT OF ENVIRONMENTAL PROTECTION
Date: November 20, 1996
Format: LETTER No. Pgs: 1
AR No. 09.01.1 Document No. 000106

10.03 ENFORCEMENT - STATE AND LOCAL ENFORCEMENT RECORDS

Title: Three (3) Interdepartment Messages Concerning Airpax Company.
Addressee: WES WINTERBOTTON - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: STANLEY ALEXANDER - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Date: 1983
Format: MEMORANDUM No. Pgs: 6
AR No. 10.03.1 Document No. 000024

Title: Consent Agreement with North American Philips Corporation.
Authors: STANLEY J. PAC, K.M. LE FEVER - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Date: May 16, 1984
Format: MISCELLANEOUS No. Pgs: 2
AR No. 10.03.2 Document No. 000025

Title: Letter Supplying Information Required by Consent Agreement.
Addressee: STANLEY J. PAC - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: ELMER MADSEN - AIRPAX CORPORATION
Date: May 18, 1984
Format: LETTER No. Pgs: 2
AR No. 10.03.3 Document No. 000026

Title: Consent Agreement Between State of Connecticut and Cheshire Associates.
Authors: STANLEY J. PAC, SAMUEL FEINERMAN - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Date: June 7, 1984
Format: MISCELLANEOUS No. Pgs: 3
AR No. 10.03.4 Document No. 000027

Title: Letter Approving the Report on Inground Fuel/Chemical Storage Tank Integrity.
Addressee: JAMES C. SCHROEDER
Authors: ROBERT E. MOORE
Date: June 20, 1984
Format: LETTER No. Pgs: 1
AR No. 10.03.5 Document No. 000028

Title: Letter Concerning Residential Well Monitoring.
Addressee: STANLEY ALEXANDER - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: TIMOTHY R. CARMODY - CARMODY & TORRANCE
Date: July 17, 1984
Format: LETTER No. Pgs: 3
AR No. 10.03.6 Document No. 000029

Title: Letter with Attachments Concerning Disposal of Contaminated Soil at Airpax Corp., Cheshire, CT.
Addressee: MARINA CRAWFORD - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: TIMOTHY R. CARMODY - CARMODY & TORRANCE
Date: August 24, 1984
Format: LETTER No. Pgs: 9
AR No. 10.03.7 Document No. 000030

Title: Letter Concerning Residential Well Monitoring.
Addressee: STANLEY ALEXANDER - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: TIMOTHY R. CARMODY - CARMODY & TORRANCE
Date: June 21, 1985
Format: LETTER No. Pgs: 4
AR No. 10.03.8 Document No. 000031

Title: Letter Concerning Residential Well Monitoring.
Addressee: THEODORE STEVENS - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: TIMOTHY R. CARMODY - CARMODY & TORRANCE
Date: February 27, 1986
Format: LETTER No. Pgs: 3
AR No. 10.03.9 Document No. 000032

Title: Letter Concerning Attached Report from Northeast Laboratories.
Addressee: DOREEN FUSCO
Authors: TIMOTHY R. CARMODY - CARMODY & TORRANCE
Date: April 17, 1986
Format: LETTER No. Pgs: 2
AR No. 10.03.10 Document No. 000033

Title: Letter Concerning Report on Contamination of the Well at 657 West Johnson Avenue.
Addressee: BRIAN CURTIS - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: TIMOTHY R. CARMODY - CARMODY & TORRANCE
Date: June 26, 1986
Format: LETTER No. Pgs: 2
AR No. 10.03.11 Document No. 000035

13.03 COMMUNITY RELATIONS - NEWS CLIPPINGS/PRESS RELEASES

Title: Public Notice: The United States EPA Proposes No Further Action Needed at the Cheshire Groundwater Contamination Site.
Authors: EPA REGION 1
Date: October 1996
Format: NEWS CLIPPING No. Pgs: 1
AR No. 13.03.1 Document No. 000091

Title: "EPA Announces No Risk at Cheshire Groundwater Contamination Superfund Site."
Authors: EPA REGION 1
Date: October 10, 1996
Format: NEWS CLIPPING No. Pgs: 2
AR No. 13.03.2 Document No. 000093

Title: Public Notice: The United States Environmental Protection Agency Announces Record of Decision for the Cheshire Groundwater Contamination Site.
Authors: EPA NEW-ENGLAND
Date: December 1996
Format: FACT SHEET, PRESS RELEASE No. Pgs: 1
AR No. 13.03.3 Document No. 000107

13.04 COMMUNITY RELATIONS - PUBLIC MEETINGS

Title: Public Hearing Transcript. Topic: Contamination Sites in Cheshire.
Date: October 24, 1996
Format: NOTES-MEETING No. Pgs: 4
AR No. 13.04.1 Document No. 000103

17.04 SITE MANAGEMENT RECORDS - SITE PHOTOGRAPHS/MAPS

Title: Site Analysis Cheshire Ground Water Contamination Site & Study Area, Cheshire, CT. [Available for review at EPA Record Center, Boston, MA.]
Authors: EPA EMSL
Date: February 1991
Format: REPORT, STUDY No. Pgs: 36
AR No. 17.04.1 Document No. 000051

17.08 SITE MANAGEMENT RECORDS - STATE AND LOCAL TECHNICAL RECORDS

Title: Documents Related to Valley National Corporation, West Johnson Ave, Cheshire, CT.
Date: 1967
Format: REPORT, STUDY No. Pgs: 17
AR No. 17.08.1 Document No. 000052

Title: Potable Water Collection Examination Reports.
Addressee: CHESPROCOTT HEALTH DISTRICT
Authors: CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Date: May 6, 1977
Format: FORM No. Pgs: 3
AR No. 17.08.2 Document No. 000023

Title: Report to General Electric on Ground Water Quality at a Site in Cheshire, CT.
Authors: GROUNDWATER ASSOCIATES
Date: December 1980
Format: REPORT, STUDY No. Pgs: 70
AR No. 17.08.3 Document No. 000011

Title: State of Connecticut DEP Industrial Survey -- North American Philips Controls Corp.
Date: 1982
Format: MISCELLANEOUS No. Pgs: 11
AR No. 17.08.4 Document No. 000072

Title: Six (6) Oversized Drawings or Blueprints of the West Johnson Avenue Area.
Date: 1982
Format: MAP No. Pgs: 6
AR No. 17.08.5 Document No. 000092

Title: Permit to Discharge Wastewater.
Addressee: MATTHEW ZIEBKA - AIRPAX CORPORATION
Authors: STANLEY J. PAC - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Date: July 18, 1984
Format: MISCELLANEOUS No. Pgs: 14
AR No. 17.08.6 Document No. 000044
*Attached to Document No. 000042 In 17.08

Title: Letter Concerning Possible Sources of Contamination of Residential Wells.
Addressee: BRIAN CURTIS - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: TIMOTHY R. CARMODY - CARMODY & TORRANCE
Date: July 18, 1986
Format: LETTER No. Pgs: 2
AR No. 17.08.7 Document No. 000036

Title: Cheshire Associates Offers to Hook Up Property to Town of Cheshire's Water Line and Cap Well.
Addressee: DOREEN FUSCO
Authors: MARK J. MALASPINA - CARMODY & TORRANCE
Date: November 10, 1986
Format: LETTER No. Pgs: 1
AR No. 17.08.8 Document No. 000087

Title: Letter Concerning Meeting and Review of Plant #2 Cooling Water System.
Addressee: WAYNE CURRY - AIRPAX CORPORATION
Authors: DAVID A. GEARHART
Date: May 4, 1987
Format: LETTER No. Pgs: 5
AR No. 17.08.9 Document No. 000045
*Attached to Document No. 000042 In 17.08

Title: Letter Concerning the Bids Received for Installation of Water Service.
Addressee: ELSIE PATTON - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: MARK J. MALASPINA - CARMODY & TORRANCE
Date: July 14, 1987
Format: LETTER No. Pgs: 4
AR No. 17.08.10 Document No. 000038

Title: Letter Requesting Modification of Permit Issued to Airpax Corporation.
Addressee: LESLIE CAROTHERS - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: WAYNE CURRY - AIRPAX CORPORATION
Date: August 3, 1987
Format: LETTER No. Pgs: 2
AR No. 17.08.11 Document No. 000042

Title: Laboratory Report No. 14152 Concerning Waste Effluent Sample received August 28, 1987.
Addressee: WAYNE CURRY - AIRPAX CORPORATION
Authors: ROBERT SILVESTRI
Date: September 8, 1987
Format: LETTER No. Pgs: 1
AR No. 17.08.12 Document No. 000049
*Attached to Document No. 000046 In 17.08

Title: Solvent Management Plan with Transmittal Letter.
Addressee: ROBERT KALIZEWSKI - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: PAMELA KATZ
Date: September 21, 1987
Format: No. Pgs: 7
AR No. 17.08.13 Document No. 000047
*Attached to Document No. 000046 In 17.08

Title: Letter Concerning Finalization of Discharge Permit and Suggested Improvements to the System.
Addressee: WAYNE CURRY - AIRPAX CORPORATION
Authors: PAMELA KATZ
Date: September 21, 1987
Format: LETTER No. Pgs: 1
AR No. 17.08.14 Document No. 000048
*Attached to Document No. 000046 In 17.08

Title: Letter Concerning Analytical Results and Sampling Recommendations.
Addressee: ELMER MADSEN - AIRPAX CORPORATION
Authors: KEVIN J. O'REILLY - GOLDBERG ZOINO & ASSOCIATES, INC.
Date: September 23, 1987
Format: LETTER No. Pgs: 10
AR No. 17.08.15 Document No. 000039

Title: Approval of Solvent Management Plan.
Addressee: WAYNE CURRY - AIRPAX CORPORATION
Authors: MICHAEL HARDER - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Date: September 28, 1987
Format: LETTER No. Pgs: 1
AR No. 17.08.16 Document No. 000046

Title: Letter Regarding the Scheduled Watermain Work to Begin October 14, 1987.
Addressee: FRANK J. GULISANO
Authors: CHRISTOPHE BOWMAN
Date: October 1987
Format: LETTER No. Pgs: 1
AR No. 17.08.17 Document No. 000088

Title: Permit to Discharge Metal Finishing Wastewater and Cooling System Blowdown.
Addressee: WAYNE CURRY - AIRPAX CORPORATION
Authors: JOHN ANDERSON - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Date: October 19, 1987
Format: MISCELLANEOUS No. Pgs: 4
AR No. 17.08.18 Document No. 000043
*Attached to Document No. 000042 In 1708

Title: Letter Concerning Cheshire Associates Payment of $100 Per Year Towards Doreen Fusco's Water Bills.
Addressee: DOREEN FUSCO
Authors: MARK J. MALASPINA - CARMODY & TORRANCE
Date: January 21, 1988
Format: LETTER No. Pgs: 1
AR No. 17.08.19 Document No. 000089

Title: Letter Report on the Results of Groundwater and Surface Water Sampling at Airpax Corp.
Addressee: ELMER MADSEN - AIRPAX CORPORATION
Authors: KEVIN J. O'REILLY, KENNETH W. MILENDER, THEODORE VON ROSENVINGE - GOLDBERG ZOINO & ASSOCIATES, INC.
Date: June 22, 1988
Format: REPORT, STUDY No. Pgs: 14
AR No. 17.08.20 Document No. 000040

Title: Letter Providing Notice That Airpax Corp. Plant II Has Eliminated the Permitted Discharge at its Facility.
Addressee: KEN MAJOR - CONNECTICUT DEPT OF ENVIRONMENTAL PROTEC
Authors: WAYNE CURRY - PHILIPS TECHNOLOGIES
Date: May 29, 1992
Format: LETTER No. Pgs: 2
AR No. 17.08.21 Document No. 000050

Title: Amended Complaint. Docket No. CV 90-0385318 S, The Lembo-Feinerman Cheshire Trust and Cheshire Associates vs Charles E. Heilig.
Authors: JAMES K. ROBERTSON - CARMODY & TORRANCE
Date: November 12, 1993
Format: LITIGATION
AR No. 17.08.22 Document No. 000041

APPENDIX B

HEALTH EFFECTS SUMMARIES

1.1 Dichloroethylene. 1,1 Dichloroethylene (1,1 DCE) may cause both carcinogenic and noncancer effects. This chemical is rapidly absorbed, has limited solubility and is not stored in body tissue. Effects occur via oral exposure or via inhalation. With respect to noncancer effects, animal experiments have shown that the liver is the organ most sensitive to 1,1 DCE. The Reference Dose (RfD) of 9 x 10 mg/kg/day is based on a rat drinking water study. Other rodent studies have shown 1,1 DCE to be toxic to developing fetuses. 1,1 DCE is also an eye and skin irritant. The health effects following prolonged or repeated dermal exposure to this compound are not known.

1,1 DCE is classified as a possible human carcinogen (Class C) based on tumors in mice exposed via inhalation. Animal data is considered limited because studies were not designed for maximum sensitivity to detect carcinogenic effects. The inhalation unit risk (5.0 x 10 5 per m 3) is based on the mouse inhalation study and the oral slope factor (0.6 per mg/kg/day) is based on a rat drinking water study. (U.S. EPA, IRIS October 1996).

Bis (2 ethyl hexyl) phthalate Human ingestion exposures to bis(2-ethyl hexyl) phthalate (BEHP) results in adverse effects to the gastrointestinal tract (Sax, 1989). The chronic oral RfD (2.0 x 10 2 mg/kg/day) and oral CSF (1.4 x 10 2 per (mg/kg/day)) available for BEHP are based on animal studies detecting adverse non-carcinogenic liver effects and liver tumors in test animals (guinea pigs)(U.S. EPA IRIS, March 1994). BEHP is categorized as a Class B2 carcinogen (probable human carcinogen) and is an experimental teratogen.

Beryllium. Skin exposure to beryllium can cause a skin rash at the point of contact. Short term exposure to beryllium by inhalation can cause formation of scar tissue in the lungs, breathing difficulty, and weight loss. Inhalation exposures to beryllium have also been associated with lung cancer.

A chronic oral RfD of 5 x 10 -3 mg/kg/day has been established for beryllium based upon changes noted in the hearts, livers, kidneys and spleens of rats administered beryllium via drinking water. Mice administered beryllium in another study showed only changes in body weight.

Beryllium is currently classified as a probable human carcinogen(Class B2) based on the results of occupational studies and animal studies (rats) demonstrating a possible relationship between beryllium inhalation exposure and lung cancer. Other cancers have also been noted. A chromic oral cancer slope factor and an inhalation unit risk of 4.3 (mg/kg/day)-1 and 2.4 x 10 -3 up/me, respectively, have been established for beryllium exposure (U.S. EPA IRIS, March 1994).

Arsenic. Arsenic is classified as a known human carcinogen (Class A) based on lung cancer mortality observed in multiple populations exposed primarily via inhalation. Increased mortality from multiple internal organ cancers (liver, kidney, lung and bladder) and increased skin cancer were observed in populations consuming drinking water high in inorganic arsenic. Arsenic is also carcinogenic via inhalation. The inhalation slope factor is based on studies of smelter workers. (U.S. EPA, IRIS October, 1996).

Noncancer effects in humans have also been observed in populations exposed via arsenic in drinking water. These effects are primarily on the skin including keratosis (formation of horny growths on the skin) and hyperpigmentation.

Benzo(a) Pyrene (B(a)P). B(a)P is chemically classified as a polynuclear aromatic hydrocarbon (PAH). PAHs are a large, diverse class of chemicals found in the environment as complex mixtures. Several PAHs have been classified as B2 carcinogens, including B(a)P. The cancer slope factor for B(a)P is derived based on animals studies demonstrating tumors of the respiratory tract and stomach in test animals exposed orally and via inhalation, respectively. Many PAHs cause tumors in the skin and epithelial tissues of test animals.

APPENDIX C

<IMG SRC 97001I>

APPENDIX D

ENVIRONMENTAL PROTECTION AGENCY HEARING

TOPIC: Contamination sites in Cheshire

Held at: Cheshire Town Hall
84 South Main Street
Cheshire, Connecticut

On: October 24, 1996, 7 p.m.

APPEARANCES:

Sarah White
Mary Jane O'Donnell
Jane Dolan

Elzbieta Kozlowski, RPR
Registered Professional Reporter

NIZIANKIEWICZ & MILLER REPORTING SERVICES
972 TOLLAND STREET
EAST HARTFORD, CONNECTICUT 06108-1533
(860) 291-9191

MS. O'DONNELL: Well seeing there aren't any other questions, I guess I'd like to open the formal part of the hearing to see if there are any formal questions people would like to make for thee record

I know that Liz has been transcribing, but she's going to continue transcribing the formal questions that people want to add.

Seeing that there aren't any, we appreciate your coming here tonight --

GAIL COLLINS: I guess I have one.

MS. O'DONNELL: If you could just state your name.

GAIL COLLINS: Gail Collins, representing Cheshire Land Trust. I'm here primarily because we were notified, and we do have property at that intersection of Nodder Drive and West Johnson Avenue, and so I am phrasing my comment as a question which is simply raising the possibility, is there not a possibility that further contamination be present at this site and if so, how would we learn about it.

MS. O'DONNELL: Any other questions or comments? Seeing that there aren't any, we thank you all for coming tonight. We appreciate it.

We'll be here as long as people want to talk to us. So please feel free to stay if you like. We'd be more than happy to answer any questions that you might have. Thank you again.

CERTIFICATION

I, Elzbieta Kozlowski, RPR, Notary Public within and for the State of Connecticut, do hereby certify that the testimony was stenographically reported by me and subsequently transcribed as thereinbefore appears.

I further certify that I am not related to the parties hereunto or their counsel and that I am not in any way interested in the event of said cause.

Witness my hand and seal as a Notary Public this 6th day of November, 1996, a Plainville, Connecticut.

ELZBIETA KOZLOWSKI, RPR
NOTARY PUBLIC

My commission expires: August 31, 1999

APPENDIX E

RESPONSIVENESS SUMMARY

CHESHIRE GROUND WATER CONTAMINATION SUPERFUND SITE

DECEMBER 1996

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A WRITTEN COMMENTS SUBMITTED BY THE PUBLIC

B COPY OF THE TRANSCRIPT FROM THE PUBLIC HEARING HELD ON OCTOBER 24, 1996

PREFACE

The U.S. Environmental Protection Agency (EPA) held a 30-day public comment period from October 21, 1996 through November 20, 1996 to solicit comments on EPA's Proposed Plan for the Cheshire Ground Water Contamination Site (the "site") in Cheshire, Connecticut. In the Proposed Plan, issued on October 10, 1996, EPA announced a preference for No Action at the site. A collection of all documents used by EPA in choosing this alternative were made available for review at the EPA Records Center at 90 Canal Street in Boston, and at the Cheshire Public Library at 104 Main Street in Cheshire, Connecticut. These documents are known collectively as the Administrative Record.

The purpose of this Responsiveness Summary is to document EPA's responses to the questions and comments raised during the public comment period. EPA considered all of the comments summarized in this document prior to its decision on this action.

This Responsiveness Summary is organized into the following sections:

Section I - No Action Alternative - This section explains the criteria used by EPA to select the No Action alternative.

Section II - Site History and Background on Community Involvement and Concerns - This section provides a brief history of the site an overview of community interests and concerns regarding the site.

Section III - Summary of Comments Received During the Public Comment Period And EPA Responses - This section summarizes and provides EPA's responses to the verbal and written comments received from the public during the comment period.

In addition, two attachments are included with this Responsiveness Summary.
Attachment A contains the written comments submitted by the public. Attachment B contains a copy of the transcript from the public meeting held on October 24, 1996 in Cheshire, Connecticut. All comments submitted during the comment period have been added to the Administrative Record.

I THE NO ACTION ALTERNATIVE

A No Action preferred alternative is being selected by EPA due to the low levels of contaminants detected on-site and the results of the human health and ecological risk assessment. EPA proposes that no further cleanup under CERCLA at the Cheshire Ground Water Contamination site is needed because:

1. Contaminated soil was removed from the site in 1984;

2. Recent monitoring found that contaminant levels in the groundwater are decreasing through natural degradation processes;

3. The site does not pose an unacceptable current or potential threat to human health or the environment.

Exposures resulting in cancer risk within the range of approximately one in ten thousand to one in a million (1 x 10 -4 to 1 x 10 -6) are considered acceptable cancer risks by EPA. EPA selected the No Action alternative primarily because the cancer risks associated with exposure to contaminated groundwater, soil, surface water and sediment are not greater than 10-4. (The carcinogenic risk associated with a future residential ingestion of ground water scenario is 4.3 x 10 -4. The risk is attributable to one contaminant, arsenic. The risk attributable to other compounds is at or below the lower end of the acceptable risk range (i.e., 10 -6). Although the risk associated with arsenic is at the upper end of the acceptable risk range (i.e., 10 -4), the contaminant is at levels below the levels established as safe in the Safe Drinking Water Act.) EPA also concluded that non-cancer adverse health effects were not likely at this site. In addition, no environmental risks are currently occurring as a result of site contamination.

II BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

SITE HISTORY

The Cheshire Ground Water Contamination site, located in the northwestern corner of Cheshire, New Haven County, Connecticut, includes the industrial property at 604 West Johnson Avenue where disposal of waste material was conducted and, in addition, those places where waste material emanating from the property has come to be located in the groundwater. The Site is immediately bounded by vacant land to the east, industrial property to the south, and Knotter Drive and Route 691 to the west and north, respectively.

The Site is primarily occupied by an industrial building at 604 West Johnson Avenue. Immediately surrounding the approximately 70,000 ft 2 building are paved parking areas to the south, west and north. Two ponds are located on the property. A single-family residence and a manufacturer of stainless steel medical needles are located immediately south of the 604 West Johnson Avenue property across West Johnson Avenue.

Residences and businesses within the immediate vicinity of the site receive, public water from the South Central Connecticut Regional Water Authority (SCCRWA). The SCCRWA operates a cluster a five public-supply wells at the North Cheshire Well Field about 2 miles southeast of the Site.

For an undetermined period of time prior to 1966 the Site was used for agricultural purposes The property was developed in 1966 and has been leased to manufacturers of custom injection molding and electro-mechanical and electronic devices until 1995.

Initial investigation of the property in 1980 indicated a petrochemical odor and oil and grease in monitoring wells installed onsite and a sheen around the edges of the large pond and in water seeping from the pond banks. Additional test holes installed to quantify the distribution of petrochemicals onsite indicated the highest levels of hydrocarbon contamination near the northwest corner of the building. Low levels of volatile organic and extractable organic compounds were also detected in water samples. Twenty cubic yards of volatile organic- and oil-contaminated soil was excavated from two areas on the property in October 1983.

EPA involvement with the Site commenced in 1985 after the Site was identified through a review of background information for another property in Cheshire. EPA sampled ground water, subsurface soils, surface water, and sediment on the 604 West Johnson Avenue property, and ground water from two residential drinking water wells, in support of a Site Inspection of the property completed in 1986. In 1990, the Site was placed on EPAs National Priorities List (NPL) of hazardous waste sites, making it eligible for federal funding for investigation and cleanup. The Site was defined as a plume of contamination from an unknown source detected in wells on property located at 604 West Johnson Avenue and in a nearby residential well.

Several sampling events and a geohydrologic study were conducted by EPA over 1994-1996 at the site in an effort to determine whether significant levels of contamination still existed in the soils, sediments, surface water and ground water. The results of these sampling events led to the initiation and subsequent completion of EPA's remedial studies in 1996.

BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

EPA's community relations program for the Cheshire Ground Water Contamination site began in 1992, which coincided with the start of site investigations being conducted by EPA.

The community relations program for the site has included community interviews, the dissemination and sharing of analytical data, the preparation of a fact sheet, and a comment period during which the public was invited to review and comment on the Proposed Plan. EPA has also maintained information repositories at the EPA regional office in Boston, MA and the Cheshire Public Library in Cheshire, CT to provide easy access to reports and other documents pertaining to the site. Community involvement in recent years has been relatively low. Approximately 12 people, including local officials, and a representative from Congressman Franks' office, attended the public information session and meeting on October 24, 1996.

III SUMMARY OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA RESPONSES

This Responsiveness Summary addresses comments received by EPA during the public comment period (October 21 to November 20, 1996). One individual offered verbal comments at the public meeting on October 24, 1996. Written comments were received from two individuals, and the State of Connecticut.

Comment 1: A representative of the Cheshire Land Trust (with property in close proximity to the site) raised the possibility that further contamination could be present at the site and, if so, questioned how they would be made aware of the contamination.

EPA Response: Low levels of contamination remain in the ground water at the 604 West Johnson Avenue property, however, EPA's comprehensive investigation of the site reveal that the levels pose no unacceptable threat to public health or the environment. The site remains eligible for Fund-financed remedial actions if conditions at the site warrant such action. Records of contamination at other locations within the Cheshire Industrial Park exist and are available for public review at the EPA Records Center at 90 Canal Street in Boston, MA and at the Connecticut Department of Environmental Protection's office at 79 Elm Street in Hartford, CT.

Comment 2: An individual commented that they are the owner of property near this site which has shown "background levels" of contamination. They questioned whether it is possible that contamination migrated onto their property from the site.

EPA Response: The Cheshire Ground Water Contamination site is limited to contaminated soil, surface water and sediment on the industrial property at 604 West Johnson Avenue where disposal of waste material was conducted and, in addition, those places where waste material emanating from the property has come to be located in the ground water. The ground water at the site is downgradient (downhill) from the commenter's property and would not have affected that property.

Comment 3: The Vice President of Sima Drilling Co., Inc. asked that all monitor wells that are no longer needed by properly abandoned.

EPA Response: All monitor wells that are no longer needed will be properly abandoned following State and local requirements.

Comment 4: The State of Connecticut Department of Environmental Protection (CTDEP) commented that the State supports EPA's recommendation that no remedial action under CERCLA is warranted. Any additional action which may be required in the future to satisfy State requirements can be addressed under State authority.

EPA Response: No response necessary. However, EPA would like to acknowledge the assistance and cooperation of the CTDEP throughout the investigation.

Attachment A

Attachment A - Intentionally Omitted

Attachment B

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