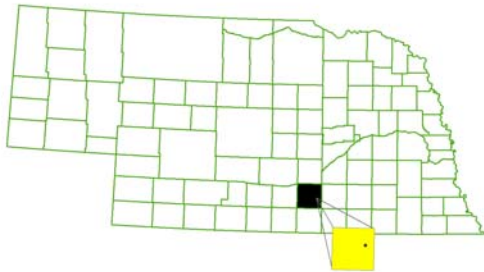


GARVEY ELEVATOR
NEBRASKA
EPA ID# NEN000704351

EPA Region 7
City: HASTINGS
County: ADAMS COUNTY
Other Names:

03/02/2009



SITE DESCRIPTION

The Garvey Elevator site (Site), located southwest of the City of Hastings, began operation as a grain storage facility in 1959. The Site is approximately 89 acres in size and is located in a predominately rural area with sparse distribution of residential properties north, east and west of the site, the closest no less than 1/4 mile away. The storage facilities at Garvey Elevator terminal consist of a concrete elevator head house and elevator, flat storage building and steel bins, having a total capacity of more than 8 million bushels. A liquid grain fumigant was used for pest control from 1959 to 1985. The fumigant, Liquid 80-20, was composed of 80 percent carbon tetrachloride (CCl₄) and 20 percent carbon bisulfide and was applied to grain in all upright grain storage areas. In 1960, Garvey Elevator installed a 3,000-gallon above-ground storage tank that was used for storage of the liquid grain fumigant. The fumigant was transferred through a delivery pipe that connected the storage tank to piping mounted on the side of the elevator and then up the side of the elevator to the distribution gallery. A buried portion of this delivery pipe was found to be leaking and was replaced sometime prior to 1986 when the tank was removed. The exact date of the repair and the amount of fumigant that leaked are unknown. The facility ceased use of the liquid fumigant in 1985.

Site Responsibility:

Garvey Elevators, Inc. declared Chapter 7 bankruptcy on March 27, 2008. This site is being addressed through Federal actions.

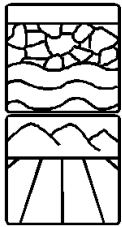
NPL LISTING HISTORY

Proposed Date: 04/27/2005

Final Date: 09/14/2005

Deleted Date:

THREATS AND CONTAMINANTS



The groundwater and on-site soil are contaminated with volatile organic compounds (VOCs), primarily carbon tetrachloride, with lesser amounts of chloroform and carbon disulfide. Carbon tetrachloride above the EPA MCL Drinking Water Regulatory Level of 5 ug/l has been found in one City of Hastings municipal water supply well and in more than 20 private water supply wells. People could be exposed to these contaminants through use of water from contaminated wells. The contaminated municipal well is no longer utilized as a supply well by the City. Impacted residential/business water wells are being addressed through alternate water provisions, whole-house water purification systems or connection to the municipal water supply.

CLEANUP APPROACH

Response Action Status



Site Studies: Garvey elevator was first identified as a source of carbon tetrachloride contamination in 1994 when water samples showed the contaminant at 199 ug/l. The potentially responsible party (PRP) subsequently conducted several environmental investigations in the vicinity of the site to determine the occurrence of carbon tetrachloride in soils and ground water in the vicinity of the elevator, evaluate remedial alternatives, and estimate the costs of the remedial action. Many of these early investigations were conducted under NDEQs Remedial Action Program Monitoring Act (RAPMA) Voluntary Cleanup Program, which Garvey entered in April 1995. Thirty-six monitoring wells were installed during various phases of investigation to define the extent of groundwater contamination. Soil and soil vapor samples collected in 1994 documented the presence of extensive carbon tetrachloride contamination of on-site soils. Contamination in the soils was extended from the ground surface to the water table at a depth of more than 100 feet. It was estimated that 55 million cubic feet of contaminated soil existed at the site. These contaminated soils represented a continuing source of groundwater contamination as contaminants were dissolved with infiltrating precipitation. In 1996, the groundwater contaminant plume was estimated to be

6,500 feet long by 3,200 feet wide in the principal regional sand and gravel aquifer. The maximum carbon tetrachloride concentration in groundwater was observed in an on-site monitoring well at approximately 29,000 ug/l.



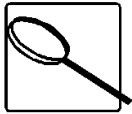
Initial Actions: Garvey Elevators initiated remedial activities while in participating in the NDEQ's VCP. These activities included the installation and operation of systems to address contaminated soil and groundwater and measures to prevent exposures to contaminated private well users. To address contaminated soils, Garvey Elevators installed a soil vapor extraction (SVE) system to treat contaminated vapor from the soils beneath the facility. The SVE began operation in January 1999. In the early stages of its operation, the extracted soil vapors contained high levels of carbon tetrachloride and the vapors were treated via a catalytic oxidation unit before being discharged to the atmosphere. It was estimated that more than 2400 lbs of carbon tetrachloride were removed in the first month alone. Within the first approximately four (4) months, soil vapor contaminant levels dropped dramatically and the catalytic oxidation unit was no longer utilized for treatment of the soil vapors prior to discharge to the atmosphere. To address groundwater contamination, Garvey Elevators installed and operated a groundwater extraction and treatment system (GETS) consisting of eight (8) extraction wells and an air stripper to remove contaminants from the extracted water. The treated groundwater is then re-injected to the aquifer. Within the first approximately two (2) years of operation, the combined SVE and GETS have removed more than 10,000 lbs of carbon tetrachloride from the soil and groundwater. Garvey Elevators continues to operate the SVE and GETS systems. Garvey Elevators completed the first of multiple residential/business well surveys in late 1994 to identify potentially impacted private water well users. The first survey included sampling of thirteen (13) residences/businesses, of which five (5) were found to be contaminated above the EPA MCL Drinking Water Regulatory Level of 5 ug/l. Subsequent surveys have identified additional impacted residential/business wells. According to NDEQ records, alternate water provisions of bottled water and/or carbon filtration systems were made available to impacted residents.



Site Studies: The NDEQ completed a Preliminary Assessment/Site Investigation (PA/SI) in April 2003. The purpose of the investigation was to collect information concerning groundwater contamination at the site sufficient to assess the threat posed to human health and the environment and to identify the source of contaminants in groundwater. Samples collected during the PA/SI support previous reports that a release of carbon tetrachloride at the site has impacted the groundwater and nearby private water wells. The PA/SI detected carbon tetrachloride in groundwater wells located more than 3 miles downgradient from the site. In August 2003 Garvey Elevators indicated they would not conduct cleanup of the entire contaminated groundwater plume within the framework of the RAPMA program. Concerned about Garvey Elevators' ability to address the on- and off-site contamination, NDEQ requested EPA assistance on December 9, 2003.



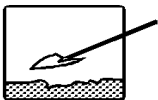
Site Studies: Garvey Elevators signed onto Administrative Order on Consent for Removal Action and Remedial Investigation/Feasibility Study which became effective October 7, 2005. Removal activities included identifying impacted residential/business private well users, supplying alternate water provisions to impacted users, assessing the nature and extent of on-site contamination and the effectiveness of the existing SVE and GETS, and enhancing the systems if needed to prevent off-site migration of contaminants. Remedial investigations were planned to occur concurrently to fully delineate the nature and extent of off-site groundwater contamination and identify feasible alternatives for addressing the contamination.



Site Studies: Between October 2005 and Early 2008, Garvey Elevators conducted additional site characterization activities under the AOC. These activities included: soil sampling and soil gas sampling in the vicinity of the former carbon tetrachloride storage tank and underground line and across the former Garvey Elevators facility; ground water sampling immediately downgradient of the source area at several locations along a transect perpendicular to the natural ground water flow direction; and monitoring water quality of private wells and providing alternate water to impacted private well users. The results of the source area ground water sampling indicated carbon tetrachloride contamination in the shallow aquifer primarily. The lateral extent of contamination at the source area suggests there may be a source or sources other than the known source of the leaking underground delivery pipe. Based on sampling conducted to date, the carbon tetrachloride plume has spread more than 3 miles from the source in the downgradient direction toward the east-southeast and is up to 1 mile wide.



Initial Actions: On March 27, 2008, Garvey Elevators, Inc. declared Chapter 7 bankruptcy. The EPA initiated federal lead Removal Actions on May 19, 2008. The EPA Removal Actions included several actions to address the immediate threat to human health posed by the contaminated private wells and to prevent further impacts to the ground water at the former Garvey Elevator facility. The EPA is initiating a Remedial Investigation/Feasibility Study to fully assess the ground water impacts and evaluate long-term solutions to the contamination.



Initial Actions: In October 2008 EPA completed modifications and repairs to the ground water extraction and treatment system (GETS) and the soil vapor extraction (SVE) system. These systems were housed in a uninsulated quonset that lacked proper climate controls and extreme seasonal temperature fluctuations had been the cause of numerous equipment failures in the past. The modifications included construction of walls to house the GETS and SVE system and climate control systems. The EPA made repairs to the systems, including well rehabilitation, pump replacement, and resolving wiring and system logic control issues. The SVE system has been reliably operating since August and has removed approximately 137 lbs of carbon tetrachloride over a three-month period from mid-August to mid-November 2008. The ground water extraction and treatment system has been

operating reliably since November 2008.

Site Facts:

ENVIRONMENTAL PROGRESS



Removal actions have addressed all private water supply wells where contamination was found to exceed an EPA MCL Drinking Water Regulatory Level. The City of Hastings is using other municipal water wells to supply city residents with clean water. A Preliminary Assessment/Site Investigation was completed by the NDEQ in April, 2003. The full extent of contamination has not been defined. Additional investigations to characterize the source area soils and ground water commenced in 2006 and are ongoing. The ground water extraction and treatment systems at the source area continue to operate. The effectiveness of the system will be assessed using information collected during the additional investigations.

COMMUNITY INVOLVEMENT

4/05 - Fact Sheet announcing the Site has been proposed for listing on the National Priorities List (NPL).

5/05 - Fact Sheet/display ad announcing the availability of the Superfund Technical Assistance Grant for the community.

9/05 - Fact Sheet announcing site has been added to the NPL.

11/05 - Fact Sheet announcing the availability of the Administrative Record and the start of the Removal Action and Remedial Investigation.

12/05 - EPA conducted interviews with several members of the community to solicit their concerns and information needs and to learn the level of involvement desired by the community.

10/06 - EPA finalized the Community Involvement Plan for the Garvey Elevator site.

7/08 - Fact Sheet/display ad announcing that EPA had taken over Removal Actions because the potentially responsible party filed Chapter 7 bankruptcy.

The EPA has been in and remains in close contact with the NDEQ, City of Hastings, impacted private water supply well users, potentially impacted private water supply well users.

SITE REPOSITORY



Superfund Records Center
901 N. 5th St.
Kansas City, KS 66101
Mail Stop SUPR
(913)551-7166

REGIONAL CONTACTS

SITE MANAGER:	Brian Zurbuchen/SUPR/R7/USEPA/US
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COMMUNITY INVOLVEMENT COORDINATOR:	Janette Lambert
PHONE NUMBER:	(913) 551-7768
E-MAIL ADDRESS:	lambert.janette@epa.gov
STATE CONTACT:	Laurie Brunner
PHONE NUMBER:	(402) 471-2214

MISCELLANEOUS INFORMATION

STATE:	NE
	A72Z
CONGRESSIONAL DISTRICT:	3
EPA ORGANIZATION:	SFD-IANE/SUPR

MODIFICATIONS

Created by:	Lynette Motley/SUPR/R7/USEPA/U S	Created Date:	11/16/2005 09:39 AM
Last Modified by:	Brian Zurbuchen/SUPR/R7/USEP A/US	Last Modified Date:	03/02/2009 09:18 AM