Community Involvement Plan

Tar Lake Superfund Site
Mancelona, Michigan
SSID# 0571

W.A. No. 010-CRCR-05ZZ/Contract No. 68-W6-0025

June 1998
Introduction
This Community Involvement Plan (CIP) for the Tar Lake Superfund site was prepared for the U.S. Environmental Protection Agency (U.S. EPA) which is responsible for community involvement and remedial activities at the site under the federal Superfund program. The CIP provides background information on the site and recommends activities the U.S. EPA will perform to inform the public and local officials about progress at the site, and to encourage community involvement during the site cleanup.

Site Description

Location and Site Features
The Tar Lake Superfund sites occupies over 200 acres in Antrim County, Michigan. The site is adjacent to the unincorporated community of Antrim, approximately 1 mile south of the Village of Mancelona. Approximately 4 acres in the northwest corner of the 200-acre site are considered the "source area" (see map on last page). The site is bordered by U.S. 131 on the west and Elder Road on the north. The area surrounding the site is a mix of rural (to the south and east), residential (west), and industrial development (north). Ground water flows northwest from the site.

Site Background
A charcoal furnace was constructed on the site in 1882 to produce iron ore. The Antrim Iron Works later purchased the facility and greatly expanded it. The company produced iron through the charcoal process. Raw iron ore was transported to the site and heated to remove impurities and liquefy the iron so it could be poured into molds known as "pigs". The production of iron through the charcoal method required a large amount of wood, which was gathered from nearby woods by lumber crews. The iron was then transported to mills throughout the Midwest for production into final products. The towns of Antrim and Mancelona grew up around the iron works and were essentially company towns. The Antrim Iron Works even distributed currency which could be used in a company store and was accepted by other merchants in the community.

To recruit workers for the Antrim Iron Works, trains were sent to several iron towns in Appalachia where iron-producing plants were closing. Thus, many of the Antrim Iron Works employees relocated to Mancelona/Antrim from Kentucky and West Virginia as well as immigrants from Eastern Europe and Scandinavia.

At its height, the iron works stretched along the east side of U.S. 131 from Antrim to Mancelona, a distance of nearly 1 mile. The company owned 100 acres of land in Antrim and at one time employed 500 people. In 1910, the Antrim Iron Works began producing charcoal in sealed retorts from which pyrolygenous liquor was recovered. This liquor was further processed into calcium acetate, methanol, acetone, creosote oil, and wood tar. This secondary chemical manufacturing process produced a waste which was discharged into a depression which became known as Tar Lake. The secondary chemical manufacturing process operated at the Antrim Iron Works until 1944. Advances in iron production and depletion of the surrounding wood supply led to the closing of the Antrim Iron Works in 1945. The site was dismantled after the plant closed and today only one building remains from the original iron works.

Community Background
The Village of Mancelona (1990 population 1,370) is located in south-central Antrim County. The unincorporated community of Antrim is located 1 mile south of Mancelona. The Town of Custer (1990 population 604) is located about 5 miles west of Mancelona and Antrim.

The western portion of Antrim County borders Grand Traverse Bay and contains several large inland...
lakes. The western portion of the county also supports a large ski resort in the Town of Custer.

Antrim County building permit records indicate that residential construction in the Town of Custer has increased significantly since 1992, while construction in the Village and Town of Mancelona has remained relatively stable. Anecdotal evidence suggests that a significant portion of new development in the Town of Custer is higher-end homes built near the Shanty Creek ski resort and near inland lakes.

Per capita income in Antrim County is 30 percent lower than the state-wide average, and per capita income in Mancelona is 30 percent lower than the Antrim County average (see following table). Mancelona’s minority population makes up 2.5 percent of the population. Native Americans are the largest minority group. Manufacturing and retail trade are the most common employment sectors in Mancelona.

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Source: 1990 U.S. Census

Site Contamination

The Tar Lake site was added to U.S. EPA’s National Priorities List in September 1983. The site was fenced in 1984. The primary contaminant source that has been identified thus far at the site is a 4-acre area of tar and tar-contaminated soils which reach depths of up to 27 feet below ground level. This area typically also contains ponded water and is the feature from which the “Tar Lake” name is derived. Other current site features include slag piles, limestone piles, one sludge pile on the west side of Tar Lake, several existing buildings, building foundations, two kettle lakes, a municipal landfill, and the remains of tank supports and cooling water ditches.

Under a 1986 Administrative Order on Consent (AOC), the potentially responsible party (PRP) was to conduct a Remedial Investigation/Feasibility Study (RI/FS) at Tar Lake. The PRP work plan proposed conducting the RI in two phases. The first phase was a preliminary endangerment assessment (PEA), which would include limited ground-water sampling. The second phase, yet to be conducted, was to be a more detailed investigation based on the findings and results of the PEA. U.S. EPA found the October 1988 draft PEA to be deficient and did not approve it.

Additional work at the site was performed by the PRP to evaluate the nature and extent of contamination in the soil and ground water underneath Tar Lake. These investigations provide evidence that Tar Lake is a continuing source of contamination to the ground water at the site. Results from a depth sounding survey revealed that part of Tar Lake is actually 10 feet below the ground-water table and reaches a depth of over 27 feet in the western part of Tar Lake. The sampling and analyses definitively established a relationship between the tar and the ground water underneath Tar Lake. Over 50 identified or tentatively identified compounds from Tar Lake have been found in the ground water. Two substances of note are benzene and styrene. Benzene was found above the Safe Drinking Water Act Maximum Contaminant Level.

Because the tar and tar-contaminated soils are a continuing source of contamination to the ground water, which is a threat to the environment as well as a threat to human health, U.S. EPA divided the remediation of the site into two operable units (OUs). OU1 will address the remediation of Tar Lake through source control and ground-water containment. OU2 will address the long-term action for ground water.
The 1986 AOC was amended in August 1990 to have the PRP conduct a Phased Feasibility Study (PFS) to address the OU1. Based on the quality of the PRP deliverables in response to the amended AOC, U.S. EPA took over the preparation of the final PFS Report. U.S. EPA completed the PFS Report, which included a risk assessment, in March 1992. A Record of Decision (ROD) for OU1 was signed in September 1992.

The major components of the remedy selected for OU1 were:

- excavating/consolidating tar and all contaminated soils posing an excess cancer risk level greater than $1 \times 10^{-6}$ in and around Tar Lake;
- consolidating tar and contaminated soils into two adjoining capped containment cells constructed in the area of contamination;
- installing a ground-water pump-and-treat system to contain contaminated ground water and treating water ponded on Tar Lake;
- reinjecting treated ground water upgradient of the extraction wells to form a closed loop system; and
- implementing institutional controls to restrict ground-water use within the areas of the existing or potential contaminant plume.

In addition, the 1992 ROD for OU1 specified that site evaluations were to be performed every 5 years over a 30-year period. The purpose of these evaluations would be to determine if site conditions had changed and what actions, if any, were necessary to address the changes.

The PRP completed predesign activities including additional sampling to characterize the nature and extent of the tar, contaminated soil, and ground-water plume. The PRP’s January 1995 Predesign Report has not been approved by U.S. EPA.

**Status of Community Involvement Activities**

A public hearing was held in August 1992 to discuss the proposed plan for cleaning up the Tar Lake site. A public comment period was also held in conjunction with the proposed plan.

A community meeting was held in Mancelona in April 1997 with local and county civic and business leaders to discuss coordination of several construction projects planned in Antrim County, including possible construction activities at the Tar Lake site. In November 1997, an information exchange between U.S. EPA and local civic officials was held in Mancelona.

Community interviews were held in Mancelona and Antrim on December 15, 16, and 17, 1997 to provide information for this CIP.

The U.S. EPA established an information repository at the Mancelona Public Library. The repository contains copies of several reports prepared during Tar Lake site investigations and a copy of the administrative record.

**Community Issues and Concerns**

In general, even though virtually the entire community is aware of the Tar Lake site, there is little concern among area residents about its potential adverse health effects. The bad smelling/bad tasting water encountered within the plume northwest of the site is regarded as a nuisance rather than a health threat among people who have private wells.

There is some concern among residents that cleaning up the site may “stir up” contaminants that
otherwise pose no threat to the community. Similarly, there is concern among residents adjacent to the existing ground-water plume that the plume may be moving and may enter their private wells.

Because Mancelona residents use a municipal water supply and the village’s wells are not threatened by the ground-water plume emanating from Tar Lake, Mancelona officials are not concerned about the potential health hazards at the site. The Village of Mancelona is interested in future opportunities to develop the site. According to Mancelona officials, a recent attempt to build a wastewater treatment plant on the Tar Lake site met with strong opposition from Antrim residents and was dropped from consideration.

Antrim residents, who are closest to the site, are hooked up to Mancelona’s water system. Therefore, they do not drink the bad smelling/bad tasting water. Antrim residents in general do not feel that the site poses a health problem. At least two people said that they played at the site as kids and swam in ponds on the site and reported no health problems.

The Mancelona water system serves residents up to approximately one mile west of the site. Residents west of the Mancelona water system service area use private wells for drinking water. The extent of the contaminated ground-water plume is not well defined. According to the Town of Custer Board Supervisor, at least 16 to 18 families in the Town of Custer are affected by the bad water, in addition to residents in the western portion of the Town of Mancelona. Sections 13, 14, 23, and 24 in the Town of Custer are affected by the bad water, although not all residents in these sections experience bad water in their wells. This area is approximately 3 to 3 1/2 miles northwest of Tar Lake.

Residents who use the bad water state that water softeners improve the quality of the water but do not completely eliminate the problem. Some residents are able to get under the plume, but others are not able to. Two residents who installed new 4-inch wells began drawing in the bad water, whereas smaller diameter wells on their property did not draw in the bad water. According to the Town of Custer board supervisor, the plume seems to be getting deeper in the Town of Custer.

Poor water quality is the largest concern among residents living above the site’s ground-water plume west of Mancelona, including the water’s impact on the resale value of their homes. Three residents also asked whether cleaning up the site may “stir up” contaminants and release more compounds into the ground water and either adversely affect water quality in the existing plume or alter the extent of the plume. Residents were also interested in when the site would be cleaned up.

Some residents suggest that the water has been bad for so long that it may be a result of some other factor. Town of Custer board members produced a letter from 1909 which complained of bad water at a private well in the town.

In general, residents were unaware of proposed methods of cleaning up the site. Two people who were aware of the on-site containment remedy in the 1992 ROD, a Town of Custer official and a former Town of Mancelona official, expressed opposition to on-site containment of contaminants.

Some residents are concerned about gas wells being drilled in the area. There is a concern among some residents that the gas wells will ‘puncture’ the contaminated ground-water plume and allow the contaminated ground-water plume to enter previously unaffected parts of the ground water supply.

According to one local official, the Tar Lake site does not directly affect Mancelona economically, but there is a stigma associated with Mancelona at least partly because of Tar Lake.

One resident said he had bad experiences with the U.S. EPA in his former role as a town board member. Overall, however, the U.S. EPA does not have a bad reputation in the community.

In an unrelated action, Dura Manufacturing in Mancelona recently replaced 13 to 14 wells in the Town of Custer due to possible ground-water contamination.
Proposed Community Involvement Plan

Introduction
The community interviews indicated that the Tar Lake site is well known within the community, however, the community knows very little about what has happened at the site in the last several years or upcoming site activities. The interviews also indicated that there are two groups of residents affected by the site:

Mancelona and Antrim residents who live adjacent to the site that are not directly affected by the contaminants in the site. These residents, especially Antrim residents, would be directly affected by the site cleanup and its future use because of their close proximity to the site.

Town of Custer residents who live several miles from the site that are directly affected by bad smelling/bad tasting water in their private wells. These residents have no direct interest in the method of site clean-up or the site’s future use, but are interested in improving the quality of their drinking water.

The U.S. EPA community involvement objectives are to 1) inform these two groups of residents of site activities and the impact of the site on public health and the environment, and 2) provide the community an opportunity to have input into the decisions made to address contamination at the site.

Based on the community interviews, the information area residents are most interested in is:

- when will the bad smelling/bad tasting water be cleaned up?
- how will the site be cleaned up and who will do it?
- will the site clean up “stir up” contaminants that now pose no threat?

Some Town of Custer residents also asked for more information on the limits of the bad smelling/bad tasting ground-water plume so residents could avoid the plume by placing wells in new locations or deeper wells in their existing location. Information provided to area residents will attempt to answer these questions to the extent possible.

Fact Sheets
The U.S. EPA is planning a series of fact sheets as the cornerstone of the community involvement program. Each fact sheet will discuss an aspect of the Tar Lake site that is of interest to the public, based on information collected during the community interviews. The first of these fact sheets is planned for January 1998. Subsequent fact sheets would follow as often as monthly.

Because the site affects residents not only adjacent to the site but also residents several miles away in a relatively fast-growing area, there is a need for a wide distribution of information. Most residents stated that mail was the most effective way to provide information to them. Therefore, the U.S. EPA has developed a mailing list of approximately one thousand residents, businesses, out-of-town landowners, and local government officials in Mancelona, Antrim, and the Town of Custer. The mailing list will be used to distribute fact sheets and other information to the community. If needed, the mailing list could be segregated into Mancelona and Antrim residents who are more interested in how the site will be cleaned up and Town of Custer residents who are more interested in information on the bad smelling/bad tasting water. It is likely that initial mailings will contain a mail-back form that can be returned to the U.S. EPA if residents do not wish to be on the Tar Lake mailing list.

A smaller list of approximately 30 Village of Mancelona, Town of Mancelona, Town of Custer,
school board, and selected local residents has also been developed. Those on this list will receive more in-depth information on upcoming site activities in advance of generally disseminated information.

**Technical Advisory Group**

A Technical Advisory Group (TAG) for the Tar Lake site was recently established and is being funded by the U.S. EPA. The TAG will allow the community to hire its own consultant to review technical information generated by the U.S. EPA and the PRP. Although the TAG is an effective method of involving the community in the site and providing residents a way to conduct their own review of technical information, the U.S. EPA is not directly involved in the TAG.

**Information Repository**

An information repository was established several years ago at the Mancelona Public Library in Mancelona. The information repository currently consists of four large, unorganized boxes of material, much of which is the site’s administrative record. U.S. EPA material not related to the Tar Lake site is also currently included in the information repository. The existing information repository does not contain easily understandable information and is not readily accessible. The information repository will be updated with a single three-ring notebook that will contain fact sheets, public notices, and other U.S. EPA documents related to Tar Lake. This binder will be provided to the library in conjunction with the first Tar Lake fact sheet. The librarian has agreed to display the binder and update it with additional Tar Lake information that is provided to the library.

**Media Relations**

The most widely read newspaper in the community is the *Antrim County News*. Residents also read the *Traverse City Record Eagle*, especially those west of the Tar Lake site. The U.S. EPA will publish notices in these newspapers prior to all public meetings and other site milestones as appropriate. The U.S. EPA will investigate the possibility of running a series of articles in the *Antrim County News* devoted to Tar Lake site activities.

**U.S. EPA Contacts**

Throughout the site investigation and remedial action, U.S. EPA’s community involvement coordinator and remedial project manager will respond to telephone inquiries from those interested in the site. U.S. EPA’s toll-free telephone number and the project staff’s direct numbers will be included in all community involvement materials.

**Public Meetings**

Availability sessions will be held in conjunction with site-related milestones. Fact sheets and newspaper announcements in the *Antrim County News* and *Traverse City Record Eagle* will be used to inform the public of the meetings.

**Community Involvement Schedule**

Community involvement activities are timed to coincide with technical milestones during the site investigation and remedial action.