ATSDR Agency for Toxic Substances & Disease Registry

Public Health Assessments & Health Consultations

PUBLIC HEALTH ASSESSMENT

MARION PRESSURE TREATING COMPANY
MARION, UNION PARISH, LOUISIANA

1. SUMMARY

On February 4, 2000, the United States Environmental Protection Agency (EPA) placed theMarion Pressure Treating Company (MPTC) site in Marion, Union Parish, Louisiana, on theNational Priorities List (NPL). The NPL identifies uncontrolled waste sites that represent apotential threat to the environment and are eligible for remediation under the ComprehensiveEnvironmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA),commonly referred to as the Superfund law.

The now-defunct MPTC site used creosote-based wood preservatives to pressure-treat wood andwood products. Wastes containing creosote were disposed of on the site. Various chemicals werefound in the tanks, pipes and other equipment left when the MPTC site closed. Visibly stainedsoils and sediments have been noted by the EPA. Chemicals of concern found at the site includecreosote, which is a mixture of polycyclic aromatic hydrocarbons (PAHs).

The Louisiana Department of Health and Hospitals/Office of Public Health (OPH)/Section ofEnvironmental Epidemiology and Toxicology (SEET) and the Agency for Toxic Substances andDisease Registry (ATSDR) determined that the site currently poses an indeterminate publichealth hazard because of the absence of data on contaminated soils and sediments at and aroundthe site. The completion of a 6-foot fence surrounding the MPTC site and contaminants onadjacent off-site property will minimize but not completely prevent current and future exposures.These conclusions are based on the Preliminary Assessment Report dated April 28, 1995, and theRemedial Investigation and Feasibility Study of the City of Marion Drinking Water Wells datedMay 19, 2000, as well as conversations with the EPA Project Manager and EPA's consultant[1,2].

City water supply wells sampled during early inspections were not affected by chemicals fromthe site. It is not likely that polluted groundwater from the site will migrate to these wells in thefuture because they are located upgradient from the site.

The Office of Public Health/Section of Environmental Epidemiology and Toxicologyrecommend that the U.S. EPA: 1) continue to restrict access to the MPTC site, 2) treat the on-site consolidation area and cap to prevent off-site migration of contaminants which may lead tounnecessary exposures, 3) take all precautions necessary to protect public health duringremediation activities, and 4) monitor groundwater and air during these activities. OPH alsorecommends that the city well water of Marion be sampled every three

years for monitoringpurposes, OPH Safe Drinking Water Program staff will undertake this responsibility.

On February 15, 2001, OPH staff conducted a public meeting to present the residents with thePublic Health Assessment for the 30-day public comment period. Residents who attended themeeting expressed concerns regarding the incidences of cancer in Marion as well as thepossibility of past exposure that may have been evidenced by odors existing throughout thecommunity when the MPTC facility was operational.

In August 2001, the Office of Public Health/Section of Environmental Epidemiology andToxicology administered a Needs Assessment to the residents living near the Marion PressureTreating Company plant (MPTC) in Marion, LA. The participating heads-of-household wereadministered a two-page questionnaire. They were also asked to complete a shorter survey for aspouse who may have worked at the plant and another form for each household member. A totalof nine households (24 participants) was surveyed: 18 (78.3%) African American, 3 (13.0%)White, 2 (8.7%) Hispanic, and 1 (4.2%) unreported. There were 12 females, 11 males, and 1unreported. The age range of the participants was from 6 months to 95 years of age. The heads-of-household were asked about their health problems and about health conditions of otherhousehold members with 12 (50%) reporting no health problems. Five respondents reportedseeing a doctor or hospital once within the past six months and one respondent reported seeingeither a doctor or hospital three times within the same time frame. Three participants surveyedwere former employees of Marion Pressure Treating Company, and six participants reported theyhad gotten creosote on their clothing. Nine participants (37.5%) were concerned aboutcontamination around their homes, four (16.6%) were not concerned, and eleven (45.8%) did not respond.

2. PURPOSE AND HEALTH ISSUES

The Office of Public Health (OPH), Section of Environmental Epidemiology and Toxicology atthe Louisiana Department of Health and Hospitals is conducting this public health assessment(PHA) to ascertain the public health significance at the Marion Pressure Treating Company's(MPTC) site in Marion, Louisiana. OPH reviews available site-related information to enable usto better assess and define pathways of exposure in order to determine the likelihood of harmfulhealth effects and take necessary action to mitigate.Also, this PHA contains recommendationsto reduce or prevent site-related contact with chemicals of concern; that is, chemicals that couldresult in harmful health effects.

In 1986, the Superfund Amendments and Reauthorization Act (SARA) amended CERCLA todirect the Agency for Toxic Substances and Disease Registry (ATSDR) to conduct public healthactivities related to the sudden or uncontrolled releases from hazardous waste sites of harmfulchemicals into the environment. Among other activities, ATSDR is authorized to conduct a PHAfor each facility or site listed, or recommended to be listed, on the NPL within one year of listing.ATSDR is also authorized to conduct public health assessment activities for a facility or an uncontrolled release (e.g., an explosion or spill) when requested by a person or persons.

3. BACKGROUND

3.1 Site Description and History

From 1964 to 1980, the now-defunct Marion Pressure Treating Company (MPTC) site used a creosote injection process to treat wood and wood products such as bridge pilings, railroad ties, fence posts, and utility poles. The property on which it operated is now known as the MPTC site.

The MPTC site is a 10-acre tract of land in the city of Marion, Union Parish, Louisiana, alongState Highway 551, approximately 0.5 miles north of the junction of State Highways 551 and 33.The waste, however, has migrated off site so that possibly a 20-acre tract of land has beenimpacted. The site is mostly rural, bound to the north, east and south by pine forest, and to thewest by State Highway 551 (Appendix A, Figure 1). Overall, the site has little recreational valueand is not attractive to young children or other trespassers, but a past report did identify a deerhunting blind near the northeastern site boundary [1].

Wood treatment facilities such as the MPTC site are the largest source of creosote in theenvironment. Creosote is a synthetic chemical which contains many compounds, particularlypolycyclic aromatic hydrocarbons (PAHs). The MPTC site comprises a former processing area,consolidation area, tank product storage area, and drainage ditches on the east and west sides ofthe former processing area. The processing area contained hazardous materials within and onstructures and equipment integral to the operation and maintenance of the facility. Suchhazardous materials were found in drums, above ground storage tanks, pressure vessels, and inmiscellaneous debris.

In November 1996, EPA funded the removal and off-site disposal of four loads of creosotesludge from on-site tanks. As part of the removal action, EPA also funded the excavation,consolidation, and capping of creosote-tainted soil and debris from the southern, northwestern, and eastern areas of the site in the former processing area.

3.2 Site Visit

On September 28, 2000, OPH staff visited the MPTC site, accompanied by a representative ofTetraTech, an EPA contractor. TetraTech's inspection noted a former office building and an openshed remained on the site, and large amounts of debris remained scattered in the site's woodedareas. About 95 barrels of waste sealed in drums were present, resting on an extensively erodedcap over excavated material. The cap was installed by EPA as part of the 1994-1997 emergencyremoval action. According to EPA, the site conditions remain fundamentally unchanged sincethis last visit.

The site has been accessed by trespassers. According to the EPA contractor, drug paraphernaliawas found on site. A deer hunting blind sits on the EPA-installed cap. But trespassing is nowunlikely because the site is continuously guarded. Also, a 6-foot fence has been installed to restrict access to all areas of observed, known, or suspected contamination, both on and off theproperty. EPA's contractor cleared trees, vegetation and debris from areas to be fenced.

In order to investigate areas of potential anomalies and delineate the extent of free phasecontamination, on-site groundwater monitoring wells have been installed at depths greater thanoriginally anticipated. Also, as a result of contaminant migration off site, the current areas of concern extend beyond the original 10 acres, to now include a total of more than 20 acres.

3.3 Demographics, Land Use and Natural Resources

Marion has a reported population of approximately 775 people. According to an EPA contractor,approximately 46 residences and 11 businesses are located within 0.50 miles of the site. Most ofthe city's residents (665 people) live within 1 mile of the site. No on-site residents have beenidentified. Big Creek, a small surface water with an intermittent flow, is approximately 500 feeteast-southeast of the site. Big Creek empties into Bayou de Loutre, some 7.5 miles to the south.Bayou de Loutre is classified as a natural and scenic stream and is used for recreational fishingfor catfish, white perch, panfish, and bass. However, recreational uses are not possible within thereaches of Big Creek near the MPTC site because the depth of the water is very shallow.

4. DISCUSSION

4.1 Environmental Contamination

This section discusses the contaminants at the site. These contaminants are evaluated in thesubsequent sections of the public health assessment (PHA) to determine whether exposure to theexisting contaminants has public health significance. The Agency for Toxic Substances andDisease Registry (ATSDR) and Louisiana Department of Health and Hospitals, Office of Public Health, Section of Environmental Epidemiology and Toxicology (OPH) select and discuss these contaminants based upon the following factors:

1. Concentrations of contaminants on and off the site.
2. Field data quality, laboratory data quality, and sample design.
3. Comparison of on-site and off-site concentrations with health assessment comparison values for non-carcinogenic endpoints and carcinogenic endpoints, and
4. Community health concerns.

The only analytical data reviewed for this PHA was the City of Marion's drinking water supplydata, which was not contaminated. The City of Marion's drinking water results were compared tothe U.S. Environmental Protection Agency's (EPA) Maximum Contaminant Levels (MCL). TheMCL is an enforceable drinking water standard. It is considered protective of health over alifetime (70 years) for individuals consuming 2 liters of water per day.

A Remedial Investigation/Feasibility Study (RI/FS), which will contain the data on soils,sediments, biota, and groundwater was not available for evaluation at this time. Therefore,conclusions have been drawn from the description of the operational history, on-site sourceswhich EPA observed during previous investigations and conversations with EPA and itsconsulting staff. RI/FS data is expected in the near future, at which time, it will be analyzed and findings will be presented in the form of a health consultation.

4.2 Pathways Analysis

To determine whether nearby residents are exposed to contaminants migrating from the site,OPH and ATSDR evaluate the environmental and human components that lead to humanexposure. This pathway analysis consists of five elements: a source of contamination, transportthrough an environmental medium, a point of exposure, a route of human exposure, and areceptor population.

ATSDR categorizes an exposure pathway as a completed or potential exposure pathway if theexposure pathway cannot be eliminated. Completed pathways require that the five elements existand indicate that exposure to a contaminant has occurred in the past, is currently occurring, orwill occur in the future. Potential pathways, however, require that at

least one of the fiveelements is missing, but could exist. Potential pathways indicate that exposure to a contaminant could have occurred in the past, could be occurring now, or could occur in the future.

An exposure pathway can be eliminated if at least one of the five elements is missing and willnever be present. Appendix B, Table 1 and Table 2 identify the completed and potential exposurepathways. The discussion that follows incorporates only those pathways that are important and relevant to the site.

4.2.1 Completed Exposure Pathways

On-site air
In 1996, the EPA removed creosote sludge from on-site open tanks. In the past, persons on the site would have been exposed via inhalation to contaminants volatilizing from the open tanks. Due to the absence of historical information, assessing historical air related pathways is not possible.

On-site soil
A completed exposure pathway to on-site soils existed in the past for employees of MPTC who worked at the wood treatment plant when it was operational, as well as individuals who trespassed onto the site. Exposure to site-related contaminants would have occurred through incidental ingestion, inhalation, or dermal contact, as creosote is known to bind to soil. The level of occupational exposure is a function of the particular job duty performed and the degree to which personal protective equipment was utilized.

The MPTC site is surrounded by a 6-foot fence and continuously guarded by security. Therefore, current exposure to trespassers is unlikely.

4.2.2 Potential Exposure Pathways

On-site groundwater
Exposure to groundwater is a potential exposure pathway even though the information available to-date show no use of the on-site groundwater. Exposure, either by dermal contact or by ingestion, could occur in the future if a well were to be installed into the shallow on-site groundwater which lies 10 to 20 feet below ground surface.

On-site soil
In the past, before a fence was erected around the contaminated areas that include the MPTC site and parts of neighboring properties, residents and others could have been exposed to contaminated soils from the site. Exposure could have occurred by inhalation, incidental ingestion, or skin contact.

The MPTC site is now surrounded by a 6-foot fence, preventing soil contact. Occupationalexposure could occur if future workers needed access to the site.

Off-site soil
Currently and in the future, there is a slight chance that windblown contaminated soils could migrate from within the fenced MPTC site to off-site locations, granting exposure to neighboring residents and visitors. Exposure may occur by inhalation, incidental ingestion, or dermal contact of contaminated soils.

On-site air
As previously mentioned, in 1996 EPA removed creosote sludge from open tanks at the

MPTC site. If subsurface soils are excavated in the future, workers and/or trespassers could be exposed via inhalation to volatile creosote constituents that may be released to on-site air.

Off-site air

In the past, there was a potential for residential exposure through inhalation of volatile constituents of creosote that may have migrated off-site via air. Approximately 46 residences and 11 businesses are located within one-half mile of the MPTC site, and most of the city's residents live within one mile of the site. Exposure may occur in the future if on-site excavation of subsurface soils occurs, as volatile creosote constituents have the potential to be released into air and migrate off-site, affecting neighboring residents and visitors near the site. This pathway does not exist at the present time, as there is no current activity at the site.

On-site and off-site surface water

Residents, persons fishing in nearby waters, and casual trespassers could all be exposed to contaminated surface water from the site, or from Big Creek. Exposure could occur either by skin contact with water or incidental ingestion. Because of insufficient data on contaminants and their levels, this pathway is classified as potential.

Off-site groundwater

The city of Marion obtains its water from two wells in Union Parish, Louisiana, located less than 1/4 mile north of the intersection of State Highway (SH) 551 and SH 33. Both of these wells are located 1 mile upgradient of the MPTC site. They draw from depths of 624 feet and 895 feet below ground surface (bgs). The pumped water is treated with chlorine at the pump and again in a water storage tank.

In January 2000, the Marion water supply wells were sampled and analyzed for volatile organiccompounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinatedbiphenyls, metals and cyanide. Both Marion water system wells met water quality criteria andstandards established by the Louisiana Department of Health and Hospitals/Office of PublicHealth.

As evidenced by the current water quality conditions, chemicals at the MPTC site are not endangering the Marion water system. It is unlikely that contaminants will migrate from the MPTC site soils or shallow groundwater in the direction of or to the depth of the city wells. The city wells are upgradient of the MPTC site, and extend to depths greater than 600 feet.

They are further protected from contaminants in soils or shallow groundwater by a clay layer.Furthermore, polycyclic aromatic hydrocarbons (PAHs), which make up about 75% of creosote,are not water soluble, and are absorbed in soil, so migration is limited. However, creosote is amixture of many compounds and some are more water soluble than others.

Because the hydrogeology of the area and connections between shallow groundwater and theaquifer in which the wells are located have not been adequately characterized, this pathway isalso classified as potential, though highly unlikely.

On-site consolidation area

The consolidation area built during EPA's 1996 removal action has begun to erode, thereby threatening the integrity of the cap. The liner covering the contaminated soil is exposed at several locations. The erosion of the cap could result in further spread of contamination. EPA's future plans include treatment of the area and cap to prevent off-site migration of contaminants.

On-site sediment
Sediments in the creek adjacent to and upgradient of the wetlands as well as Big Creek and an unnamed tributary, could contain creosote-related organic compounds. Two on-site ditches lead from the eastern and western sections of the former processing area and drain toward Big Creek and the unnamed tributary. Black creosote stains have been observed in both of the on-site ditches [1].

Past exposure to the potentially contaminated areas may have occurred via incidental ingestionor skin contact by MPTC workers or those who may have trespassed on the site.

Off-site sediment
Sediment has been transported from on-site ditches to off-site ditches. Incidental ingestion of sediment and skin contact with contaminated sediments in the unnamed tributary and in Big Creek could expose recreational visitors and trespassers to contaminants from the site.

Biota
Historical information suggests Big Creek biota includes catfish, white perch, panfish, and bass. Isolated pools along Big Creek that are inadequate for recreational fishing support only a few mosquitofish, sunfish, and catfish (length of fish ranged from 2 to 3 inches). However, because data regarding the contaminants which biota absorb or ingest is currently inadequate, this pathway must also be classified as potential.

4.3 Public Health Implications

4.3.1 Toxicological Evaluation

To evaluate health effects, ATSDR has developed minimal risk levels (MRLs) for contaminantscommonly found at hazardous waste sites. The MRL is an estimate of daily human exposure to acontaminant below which non-cancer, adverse health effects are unlikely to occur. The MRLsare developed for each route of exposure, such as ingestion and inhalation, and for length ofexposure, such as acute (less than 14 days), intermediate (15 to 364 days) and chronic (greaterthan 365 days). The ATSDR presents these MRLs in Toxicological Profiles. These chemicalspecific profiles provide information on health effects, environmental transport, human exposure,and regulatory status. When MRLs are not available, reference doses (RfDs) provided by theEPA are used for comparative purposes.

The health effects, which result from the interaction of an individual with a hazardous substancein the environment, depend on several factors. One is the route of exposure, which includeswhether the chemical is breathed, consumed with food or water, or contacts the skin. Anotherfactor is the dose to which a person is exposed, and the amount of the exposure dose that isactually absorbed into the body. Mechanisms by which chemicals are altered in the environmentor absorbed into the body, are also important. Many variations in these mechanisms exist fromone individual to another.

The Remedial Investigation Report which describes the levels of contaminants currently in soils,sediments and groundwater at MPTC site has not yet been released by the EPA. Based onknowledge that the MPTC site was a creosote wood preserving facility and the description ofspecific sources on the property in the Preliminary Assessment, such as tanks, pipelines andstained soils, we know that creosote and PAHs are the likely site contaminants. PAHs arediscussed in the following paragraphs [1].

Creosote
Creosote is a complex mixture of organic compounds produced through coal tar distillation.

The composition of coal tar and creosote vary, but PAHs constitute about 75% of creosote [3]. Creosote is an EPA Group B1 (probable) human carcinogen.

Exposure to creosote vapors can cause respiratory tract irritation. Exposure or direct contact withskin can cause sun sensitivity and skin damage. Coal tar creosote is considered a probable humancarcinogen. Creosote and coal tar products have caused skin cancer in animals.

Polycyclic Aromatic Hydrocarbons

Because the MPTC site was a creosote wood preserving facility, polycyclic aromatic hydrocarbons (PAHs) are likely to be present in the soils and sediments on and off the site. Thus, in the past, exposure to PAHs through soil ingestion could have occurred to adults who worked at the site and to trespassers who might have wandered onto or played at the site.

PAHs are a group of chemicals formed during burning and are often found in the environment insmoke, tobacco, creosote, soot, coal and charbroiled meat. PAHs usually occur as complexcombinations of chemicals rather than single compounds. More than 100 different PAHs exist.Generally, PAHs are not water soluble, but are readily absorbed in soil, so migration is limited.PAHs can be divided into noncarcinogenic and carcinogenic compounds [5].

Noncarcinogenic PAHs

Noncarcinogenic PAHs include acenaphthene, anthracene, fluoranthene, fluorene, and pyrene. This is based on the fact that there is no human data available and inadequate data from animal bioassays. Acenaphthene, anthracene, and fluorene are chemical intermediates in dyes, plastics, pesticides, explosives, and chemotherapeutic agents.

Noncarcinogenic PAHs are ubiquitous in soil. Data from national background soil concentrationsreveal that generally, urban areas experience higher levels of noncarcinogenic PAHs than doagricultural and rural areas. Noncarcinogenic PAHs (and particularly, lower weight PAHs such asacenaphthene, anthracene, and fluorene) can volatilize or leach from soil.

Carcinogenic PAHs

Studies show certain PAHs can cause cancer in animals. No studies have been identified establishing a direct association between human skin exposure to single PAHs and cancer. However, reports of skin tumors among individuals exposed to PAH mixtures do exist [5]. These reports suggest a potential of PAH carcinogenicity. Animal studies have documented the ability of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-cd) pyrene to induce skin tumors following intermediate skin exposure [5]. These contaminants are considered to be carcinogenic.

4.3.2 Child Health Initiative

ATSDR's Child Health Initiative recognizes the unique vulnerabilities of infants and childrendemand special emphasis in communities faced with water, soil, air, or food contamination.Children are at greater risk than adults from certain kinds of exposures to hazardous substancesemitted from waste sites and other uncontrolled releases. They are more likely to be exposedbecause they play outdoors and they can carry food into contaminated areas. They are usuallyshorter than adults, which means they breathe dust, soil, and heavy vapors close to the ground.Children are also smaller, resulting in higher doses of chemical exposure per body weight. Thedeveloping body systems of children can sustain

permanent damage if toxic exposures occurduring critical growth stages. Most importantly, children usually depend on adults for housing,risk identification, management decisions, and medical care. Although this PHA has been affected by a lack of data, several exposure pathways exist to which a child would be sensitive.

4.3.3 Community Concerns

In August 2001, the Office of Public Health/Section of Environmental Epidemiology andToxicology conducted a Needs Assessment of the residents living near the Marion PressureTreating Company plant (MPTC) in Marion, LA. The summary of the findings is presented inAppendix C.

On February 15, 2001, OPH staff conducted a public meeting to present the public commentversion of this public health assessment. The following two comments were noted:

-Residents expressed concern over seemingly excess incidences of cancer.

> Residents of Marion requested that a health statistics review be conducted for the MPTCsite to determine if there is a causal relationship between site-related creosotecontaminants at the MPTC site and the incidences of cancer in Marion.
>
> OPH attempted to perform a preliminary screen of cancer cases for Union Parish asascertained by the Louisiana Tumor Registry. The findings were intended to be presentedin the form of a Health Consultation. If upon conclusion of the preliminary review, cancer cases were not comparable to statewide norms, a further investigation was to beundertaken.
>
> However, upon receipt of the Louisiana Tumor Registry data for Union Parish, OPH staffdetermined that the data was not well suited for a health statistics review. The majority ofcases in Marion are indexed by rural route and do not correspond to a physical streetaddress, therefore lacking an exact location of disease. Without this vital information, a health statistics review cannot be completed that indicates cancer incidence as related to proximity to the MPTC site.

-Residents expressed concern over possible past exposure that may have been evidenced by odors, and smells existing throughout the community when the facility was operational.

> Past exposure to on-site workers presents an indeterminate health risk due to the absenceof historical information, therefore, assessing historical air related pathways is notpossible. For those residents that live nearby, although noxious odors may have been anuisance, and may have been irritating to certain sensitive populations in the past,currently the site poses no health threat though air exposure.

5. SITE UPDATE

The 6-foot fencing is now constructed around the 20-acre site which includes both the original on-site area and the off-site area believed to be contaminated because of visibly stained soils andsediments. When the fence was completed, the 24-hour security was discontinued.

The EPA performed additional sampling in the spring of 2001, more than originally planned for the Remedial Investigation (RI), due to the discovery of creosote waste in the municipal sewage treatment pond and the discovery of a free phase dense non-aqueous liquid in the shallow on-site groundwater. The RI report is expected to be released in the near future by EPA, at which point,the findings will be presented to the public in the form of a health consultation. As of November2002, OPH has not received a final Remedial Investigation Report with the data in a useable format.

6. CONCLUSIONS

OPH and ATSDR conclude that insufficient data are available to determine the public health impactof the Marion Pressure Treating Company (MPTC) site. This finding results in classification of thesite as an indeterminate public health hazard. Historical data do not characterize the extent orduration of human exposure to sediments, surface soil, subsurface soil, surface water, air or biota, andno current information exists by which these media can be so characterized. Finally, current data isinsufficient to determine whether the site could have had, or could in the future have, an adverseimpact on human health. This conclusion is based on a preliminary site assessment and conversationswith the Environmental Protection Agency.

EPA informed OPH that shallow groundwater on the site is contaminated; however, the wells fromwhich the City of Marion draws its drinking water currently meet existing federal and state safedrinking water standards.

As documented by EPA, some on-site waste sources have been removed, therefore eliminating somepotential exposure sources. A fence which surrounds the original 10-acre property and the additional10 acres of contaminated off-site soils and sediments was completed in October 2000. Exposure tosite contaminants by nearby residents or trespassers is much less likely now that the fence has beencompleted.

The area is not attractive to recreational fishermen because the water in Big Creek is very shallow.If conditions change, then reevaluation would be needed, as this evaluation was based on limited data.

7. RECOMMENDATIONS

1. The Office of Public Health, Section of Environmental Epidemiology and Toxicology (OPH) recommends that the U.S. Environmental Protection Agency (EPA) continue torestrict access to the site.

2. OPH recommends that the EPA treat the on-site consolidation area and cap to prevent off-site migration of contaminants which may lead to unnecessary exposures.

3. OPH recommends that the EPA take all precautions necessary to protect public health during remediation activities. In addition, OPH recommends that the EPA continue to monitor groundwater and air during these activities.

4. OPH recommends that the city well water of Marion be sampled every three years for monitoring purposes. OPH Safe Drinking Water Program staff will undertake this responsibility.

5. OPH recommends that the Remedial Investigation Report and associated data tables beforwarded in a compatible format to OPH so that OPH can provide a more definitive public health message about this site.

8. PUBLIC HEALTH ACTION PLAN

The following describes the actions taken by ATSDR and/or OPH/SEET at the Marion PressureTreating Company (MPTC) site and the surrounding community. The purpose is to ensure thatthis public health assessment has not only identified public health hazards, but provided a plan ofaction designed to mitigate and prevent adverse human health effects resulting from exposure tohazardous substances in the environment. The public health actions which have been implementedby ATSDR/SEET are as follows:

Actions Planned

1. The Office of Public Health, Section of Environmental Epidemiology and Toxicology (OPH) will obtain a copy of the complete set of the most recent Environmental ProtectionAgency (EPA) sampling data and associated maps to identify sample locations,concentrations, and depths. OPH will prepare health consultations on any further data.

2. The OPH Safe Drinking Water Program staff will sample the city well water every threeyears.

3. OPH will address site-related community concerns raised at future public meetings.

4. EPA will treat the on-site consolidation area and cap to prevent off-site migration ofcontaminants which may lead to unnecessary exposures.

Actions Taken

1. On January 27, 2000, the Louisiana Department of Health and Hospitals, Office of PublicHealth, Safe Drinking Water Program sampled City of Marion municipal well water, andfound it met current federal and state safe drinking water standards.

2. On September 28, 2000, OPH staff attended an EPA availability session for the MPTC site and on that same day visited the MPTC site.

3. On February 15, 2001, OPH staff conducted a public meeting to present this public health assessment.

4. OPH staff attempted to perform a preliminary cancer statistics review for the MPTC site, as requested per the residents of Marion.

5. On August 18, 2001, OPH staff administered a Needs Assessment to the residents living near the MPTC site. A summary of the findings is presented in Appendix C.

9. AUTHORS

Louisiana Department of Health and Hospitals
Office of Public Health
Section of Environmental Epidemiology and Toxicology
Telephone Number: (504) 568-8537 or toll-free (888) 293-7030

Darcie Olexia, M.S.P.H.
Kimberly M. Gallo, M.S.P.H.
Erica M. Caesar, M.S.P.H.
Margaret Metcalf, Sc.D.
Sharee M.. Rusnak, M..S.P.H.
Kabrina Smith, M.S.

ATSDR Senior Regional Representative

George Pettigrew
Regional Operations, Region VI

ATSDR Technical Project Officer

Tammie McRae, M.S.
Environmental Health Scientist

10. REFERENCES

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2. Tetra Tech. Remedial investigation and feasibility study for Marion Pressure TreatingCompany, Marion, Union Parish, Louisiana and City of Marion, summary of water qualityanalyses, City of Marion drinking water wells.

3. Agency for Toxic Substances and Disease Registry. Toxicological profile for creosote. Atlanta: US Department of Health and Human Services; 1996.

4. Agency for Toxic Substances and Disease Registry. Toxicological Profile for naphthalene. Atlanta: US Department of Health and Human Services; 1995.

5. Agency for Toxic Substances and Disease Registry. Toxicological profile for polycyclicaromatic hydrocarbon (PAHs). Atlanta: US Department of Health and Human Services;1995.

11. CERTIFICATION

This Marion Pressure Treating Company Public Health Assessment was prepared by theLouisiana Department of Health and Hospitals under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time of its preparation.

Alan W. Yarbrough
for Tammie McRae, MS
Technical Project Officer, SPS, SSAB, DHAC

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

Roberta Erlwein
Chief, Superfund Site Assessment Branch, DHAC, ATSDR

APPENDIX A: FIGURE

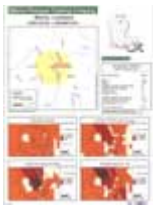

Figure 1. Site Area Map

APPENDIX B: TABLE

Table 1.

Completed Exposure Pathways

Media	Exposure Pathway Elements					Time
	Source	Environmental Media	Point of Exposure	Route of Exposure	Exposure Population	
Air	Volatilization of Site Contaminants	Air	On-site air	Inhalation	Trespasser	Past
Soils Sediment	MPTC site	Soils	On-site soil	Incidental ingestion Inhalation Skin contact	Trespasser MPTC workers	Past

Note: MPTC site = Marion Pressure Treating Company

Table 2.

Potential Exposure Pathways

Media	Exposure Pathway Elements					Time
	Source	Environmental Media	Point of Exposure	Route of Exposure	Exposure Population	
Air	MPTC site	Air	On-site air	Inhalation	Trespassers Future Workers	Future
			Off-site air		MPTC workers Residents/Visitor Trespassers	Past Future

Soil	MPTC site	Soil	On-site soil	Inhalation Incidental ingestion Skin contact	Off-site residents Visitors Trespassers Future workers	Past Present Future
			Off-site soil		Off-site residents Visitors	Present Future
Surface Water	MPTC site	Surface Water Sediment Biota	On-site surface water Off-site Big Creek	Incidental ingestion Skin contact	Off-site fisher Off-site resident Trespasser	Past Present Future
Shallow Groundwater	MPTC site	Shallow groundwater	On-site shallow groundwater	Incidental ingestion Skin contact	Trespasser	Past Present Future
Groundwater	MPTC site	Off-site groundwater	Residential Tap	Ingestion Skin contact	Off-site residents	Past Present Future
Sediment	MPTC site	Sediment	On-site sediment	Incidental ingestion Skin contact	MPTC workers Trespassers	Past Present Future
Sediment	MPTC site	Sediment	Off-site fishing	Incidental ingestion Skin contact	Off-site fisher Off-site wader Off-site swimmer	Past Present Future
Biota	MPTC site	Fish	Fish consumption	Fish consumption	Off-site resident Off-site fisher	Past Present Future

Note: MPTC site = Marion Pressure Treating Company

APPENDIX C: NEEDS ASSESSMENT SUMMARY

Executive Summary of Responses to the Needs Assessment/Questionnaire on a Community living near the Marion Pressure Treating Company

EPA FACILITY ID: LAD 008473142

September 13, 2001

On a rainy day on Saturday, August 18, 2001, five staff members from the Office of PublicHealth, Section of Environmental Epidemiology and Toxicology conducted a Needs Assessmenton the residents living near the Marion Pressure Treating Company plant (MPTC) in Marion, LA. A two-prong approach was used having one staff member stationary at the Town Hall tocomplete and collect questionnaires from residents, while two teams of two staff members eachwent door-to-door to the houses within one-half mile of the MPTC site.

The heads-of-household were administered a two page questionnaire and completed a shortersurvey for a spouse who may have worked at the plant and another form for each householdmember. A total of nine households (24 participants) was surveyed: 18 (78.3%) AfricanAmerican, 3 (13.0%) White, 2 (8.7%) Hispanic, and 1 (4.2%) unreported. There were

12females, 11 males, and 1 unreported. The age range of the participants were from 6 months to 95years of age. The residents surveyed lived in the area from 6 months to 40 years. The age of thehouses ranged from 7 years to 50 years.

The heads-of-household were asked about their health problems and about the health conditionsof other household members. The majority, 12 (50.0%), reported no health concerns. Someother conditions reported were allergies, skin problems, high blood pressure, heart problems,cholesterol, congenital eye cataracts, and thyroid conditions.

Data was analyzed regarding whether or not the heads-of-household visited a doctor or hospitaland whether or not they had visited either within the last six months. Five respondents reportedseeing a doctor or hospital once within the past six months and one respondent reported seeingeither a doctor or hospital three times within the same time frame. The doctors who thehouseholds visited are Doctors Burns, Uncle, and Zeigler. The majority of respondents visitedeither the Louisiana State University Medical Center in Monroe or the North Monroe Hospital.

The heads-of-household were also asked if they or anyone in their household were formeremployees of Marion Pressure Treating Company. Three participants surveyed were formeremployees with job responsibilities such as laborer, posts peeler, and treater of wood. Sixparticipants reported they had gotten creosote on their clothing and removed it by such means assoap and water, gasoline, just wearing out, or did nothing. Respondents, other than workers, hadgotten creosote on their clothes.

Eleven of the participants lived within one-half mile of the plant. They have lived there from arange of 7 years to 40 years. There were ten no-responses to this question. The overwhelmingresponse of the residents that reported living in close proximity of the plant reported a constantsmell during its operational period.

Finally, nine (37.5%) of the participants were concerned about contamination around theirhomes. A total of four (16.6%) was not concerned and eleven (45.8%) did not respond. Thelocations where the majority expressed concern were the front yards and all land areas. Other areas of concern were city water supply and land near the site.

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Page last reviewed: December 21, 2009
Page last updated: December 21, 2009
Content source: Agency for Toxic Substances and Disease Registry

Agency for Toxic Substances and Disease Registry, 4770 Buford Hwy NE, Atlanta, GA 30341
Contact CDC: 800-232-4636 / TTY: 888-232-6348