

Health Consultation

HURRICANE RESPONSE SAMPLING ASSESSMENT FOR
DELATTE METALS

PONCHATOULA, TANGIPAHOA PARISH, LOUISIANA

EPA FACILITY ID: LAD052510344

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

Health Consultation: A Note of Explanation

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

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

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HEALTH CONSULTATION

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DELATTE METALS

PONCHATOULA, TANGIPAHOA PARISH, LOUISIANA

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Prepared by:

Louisiana Department of Health and Hospitals
Office of Public Health
Section of Environmental Epidemiology and
Toxicology
Under Cooperative Agreement with the
U.S. Department of Health and Human Services
Agency for Toxic Substances and Disease Registry

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List of Acronyms

ATSDR	Agency for Toxic Substances and Disease Registry
EPA	Environmental Protection Agency
LDEQ	Louisiana Department of Environmental Quality
LDHH	Louisiana Department of Health and Hospitals
NPB	North Ponchatoula Battery
NPL	National Priorities Listing
OPH	Office of Public Health
OSHA	Office of Safety and Health Administration
RP	Robertson's Property
SEET	Section of Environmental Epidemiology and Toxicology
ug/L	micrograms per liter

Summary and Statement of Issues

The August 29, 2005 landfall of Hurricane Katrina and the September 24, 2005 landfall of Hurricane Rita resulted in extensive flooding throughout southern Louisiana. Following the hurricanes, a number of National Priorities Listing (NPL) sites throughout southern Louisiana were visited and sampled. The objectives of these events were to identify any damage that these sites suffered from the hurricanes, to determine whether the remedial actions at these sites remained effective, and to determine whether any contaminant levels had increased at the sites following hurricane-related flooding.

The United States Environmental Protection Agency (US EPA), in coordination with the Louisiana Department of Environmental Quality (LDEQ), sampled groundwater from two monitoring wells at the Delatte Metals site. Through a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), the Louisiana Department of Health and Hospitals/Office of Public Health/Section of Environmental Epidemiology and Toxicology (LDHH/OPH/SEET) has developed the following health consultation to review these groundwater samples. The primary goals of this document are to determine whether any contaminants that would pose a public health hazard had leached from residual soils into the site's ground water following Hurricane Katrina and to establish what further public health actions, if any, may be needed.

Background and Site History

The Delatte Metals NPL site is located in Tangipahoa Parish, Louisiana, about 5.5 miles south-southeast of the city of Hammond, and 1.5 miles southeast of the city of Ponchatoula. The site is approximately 19 acres in size and encompasses the adjacent properties of Delatte Metals, Inc. and a portion of the Ponchatoula Battery Company. The site is bounded by a tributary of Selser's Creek to the north, by Weinberger Road to the south, and by private residences to the east and west. Because similar operations were performed and the same type of waste material was generated at both the Delatte Metals property and the Ponchatoula property, they were merged into a single site for NPL activities. The portion of Ponchatoula Battery which is not included in the NPL site is identified as Robertson's Property and underwent an EPA non-Superfund emergency removal action in 1996 [1].

Ponchatoula Battery Company

The Ponchatoula Battery Company is made up of two land parcels, North Ponchatoula Battery (NPB) on the north side of Weinberger Road, and on the south side, Robertson's Property (RP). Operations began at RP in the 1960's and moved in the 1970's to the 3.7 acre NPB. The operation was originally cited in the 1970's for acid discharge to off-site waterways. Noncompliance with LDEQ and Office of Safety and Health Administration (OSHA) regulations forced the company to cease operations in 1981. Several site evaluation and cleanup efforts were conducted by the property owner, including removing a battery casing pile, backfilling surface

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impoundments, and remediating soils to less than 1,000 parts per million (ppm) lead. A 6- to 8-inch cover of clean soil was put down in a contaminated area. In 1987, the remaining lead and casings were moved to a warehouse at the Delatte Metals site. Contaminated soils were excavated and moved to a concrete pad at Delatte Metals. Eight monitoring wells were installed in the area, three of which were installed at NPB [1].

EPA conducted a Site Inspection in 1981, an Expanded Site Inspection in 1993, and a Site Assessment in 1994. Elevated lead concentrations in residential soils near the RP site necessitated an emergency removal action. The removal action consisted of the excavation, transport and disposal of 7,000 tons of battery chips and soil and 1,200 cubic yards of lead-contaminated soil, including the top 2 feet of soil surrounding two houses on the property [1].

Delatte Metals Company

The Delatte and Fuscia Battery Company began operations in the 1960's and was renamed Delatte Metals in the early 1980's. Spent lead-acid batteries were cut open at the site, and the acid was drained into holding ponds. Lead was recovered from the acid, smelted into ingots, and sold. Battery casings were discarded on site [1].

In 1984, an LDEQ site inspection identified the facility as a hazardous waste treatment storage and disposal facility. Another LDEQ inspection in 1987 revealed unauthorized activities at the site, including surface discharge of caustic water. The site was also inspected by EPA and cited for a variety of violations. LDEQ denied Delatte's hazardous waste operating permit in 1995, but a portion of the site continues to function as a scrap metal salvage business [1].

An EPA site investigation was completed in March 1997, and a removal assessment was completed in April 1998. During the fall of 1998, a removal action was performed to dispose of more than 30,000 tons of crushed battery casings, smelter slag, and smelter ash; 68 tons of grossly contaminated smelter equipment; 28 drums of lead-contaminated oil and oil debris; 6,617 gallons of sulfuric acid; and 650 tons of scrap metal. Contaminated soils were also excavated from residential properties and contaminated sediment in a roadside ditch along Weinberger Road was excavated to facilitate the installation of a public water supply pipe [1].

Delatte Metals NPL site

The NPB property was combined with Delatte Metals to form the Delatte Metals site on the NPL in January 19, 1999. In March 1999, EPA sampled soil, sediment, surface water, and ground water samples adjacent to the site to define the extent and nature of site contamination. A remedial investigation was conducted from January to May 1999 and the report was released in January 2000 [1]. Remedial action began in 2002. Approximately 41,000 cubic yards of on-facility soil and 1,400 cubic yards of off-facility soil were excavated, treated, and disposed of at an offsite landfill. An estimated 1.5 million gallons of water was treated and discharged. Approximately 450 tons of concrete was disposed of as hazardous waste. Three acres were

cleared and grubbed and all trees, shrubs, and stumps were chipped and scattered on-facility [1]. Long-term operations and maintenance activities include groundwater monitoring to track attenuation and potential migration of metal contamination into site groundwater. Routine site inspections will be performed to ensure the integrity of the remedial action. Institutional controls limit the site reuse to industrial [1].

The August 29, 2005 landfall of Hurricane Katrina and the September 24, 2005 landfall of Hurricane Rita resulted in extensive flooding throughout southern Louisiana. On September 27, 2005, the CH2MHILL environmental consulting company conducted a site inspection of the Delatte Metals NPL site at EPA's request. The site visit was performed to determine whether the remedial actions in place at the site had been compromised by Hurricane Katrina. Appendix A includes photographs taken during the site visit. The site inspection team noted that in two places, trees had fallen on the perimeter fence, damaging the fence and mesh view barrier. The view barrier had fallen down in several places. A tree had also fallen near a monitoring well, but no damage to the well was observed [2]. None of the observed structural damages affect the remedy in place at the site. The property owner has the responsibility to repair these damages (personal communication, Katrina Higgins-Coltrain, EPA Site Contact).

Groundwater samples were collected from two monitoring wells at the site on October 1 and verified through resampling the same wells on October 11, 2005. These samples were analyzed to determine whether any contaminants from residual soils left after excavation had migrated into the groundwater following the hurricane. Figure 1 shows the location of the two wells sampled at the site. The results of the October 1 sampling event were compared to samples collected by EPA in May 2005 as part of regular post-construction groundwater monitoring program at the site. Concentration of arsenic, lead, manganese, and nickel were found to have increased in one well (MW-01). In the other well (MW-02), only manganese was detected at a higher concentration than recorded during the May 2005 sampling event. Lead levels in this well were comparable to pre-hurricane levels, nickel levels were lower than pre-hurricane levels, and arsenic was not detected. The October 11 resampling event detected metal concentrations similar to the October 1 event [3,4].

Demographics

A site health assessment published in March 2005 approximated 650 people living within 1 mile of the Delatte Metals NPL site [1]. Census 2000 results reported a total population of 2,468 within the census block that encompassed the site. The largest ethnic group in this census block at that time was Caucasian (63.8%), followed by African-American (34.8%). Thirty percent (30%) of the population age 25 years or older in 2000 had earned at least a high school diploma. The median household income was \$23,438.



Adapted from: CH2M HILL, Inc. Hurricane Katrina Response: Delatte Metals Superfund Site, Louisiana, Site Inspection and Sampling Results. CH2M HILL Technical Memorandum 05-8256. 2005 Nov 4.

Discussion

Data Used

A shallow groundwater sample was taken from each of two monitoring wells at the Delatte Metals site on October 1, 2005. This sampling pattern was repeated for verification on October 11, 2005. These sampling events were part of the EPA's characterization of post-hurricane conditions at NPL sites throughout southern Louisiana. The samples were analyzed for 20 heavy metals.

Exposure Pathways

A July 1996 search of all Department of Transportation and Development registered water wells within 2 miles of the Delatte Metals NPL site identified 5 public wells and 48 domestic wells within a 2-mile radius of the site. A door-to-door survey within a 0.5-mile radius of the site inventoried 38 households that either owned an unregistered well or used an adjacent well. Available data has indicated that the groundwater from residential wells in this area is not contaminated [1].

Past sampling events have shown that the local water-bearing aquifer zones that provide the domestic water supply have not been contaminated by the metals detected in Delatte's groundwater. The groundwater from which the Delatte Metals NPL site samples were collected is from a separate water-bearing zone [1,2]. The local population is therefore unlikely to come into contact with contaminants present in this exposure medium unless the contaminants migrate into the deeper aquifer. Long-term groundwater monitoring at the site currently shows no evidence of such migration [1]. There is no current exposure pathway between groundwater contaminants at the Delatte Metals NPL site and the local population.

Evaluation Process

Table 1 lists the metals detected in groundwater at the Delatte Metals NPL site. High concentrations of metals can be a cause of concern in water used for drinking, cooking, bathing, recreation, or irrigation. Since the groundwater tested at the Delatte Metals NPL site is not used for any of these purposes and since site contaminants have not migrated into domestic groundwater sources, the contaminants detected pose no public health hazard.

Child Health Considerations

It is unlikely that children would be exposed to the groundwater from the Delatte Metals NPL site. The site groundwater supply and the domestic groundwater supply do not share a common source. No contaminant migration has been recorded from the site groundwater to domestic groundwater sources. SEET found no public health hazard to children under these conditions.

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Table 1. Contaminants detected in shallow groundwater from the Delatte Metals site sampling events.

Contaminant	Well MW-01	Well MW-01	Well MW-02	Well MW-02
	(ug/L*) 10/1/05	(ug/L*) 10/11/05	(ug/L) 10/1/05	(ug/L) 10/11/05
Aluminum	516,000	463,000	49,800	38,200
Arsenic	89	125	--	--
Barium	18.9	22.1	17.7	18.3
Beryllium	57.5	52.4	5.58	--
Cadmium	--	--	213	195
Calcium	170,000	159,000	22,300	19,700
Chromium	144	133	20.4	15.1
Cobalt	385	367	58.9	48.4
Copper	39.1	35.1	53.8	42.3
Iron	565,000	527,000	46,100	40,000
Lead	27	--	--	--
Magnesium	194,000	178,000	24,900	21,200
Manganese	10,100	9,520	2,190	1,730
Nickel	519	499	90.2	70.2
Potassium	22,100	19,000	4,650	4,600
Sodium	1,030,000	977,000	117,000	111,000
Vanadium	338	316	36.9	25.4
Zinc	710	651	525	461

*ug/L = micrograms per liter

Conclusions

The minor physical damage Hurricane Katrina caused at the Delatte Metals NPL site did not compromise the remedy instituted to protect the public against site-related health hazards. A post-hurricane evaluation of groundwater detected an increase in concentrations of arsenic, lead, manganese, and nickel in one monitoring well and an increase in manganese in a second monitoring well. The increase in metal concentrations since the last routine groundwater sampling event indicates that some leaching of metals from residual waste soils may have occurred. However, there is no evidence that these contaminants will migrate into the domestic water supply. Groundwater from the Delatte Metals NPL site, therefore, currently poses no public health hazard to the community around the site.

Recommendations

- Groundwater sampling should continue at the Delatte Metals NPL site to monitor the concentrations of contaminants and to detect any potential for migration of contaminants to the aquifer zones that provide the local domestic water supply.

Public Health Action Plan

The information produced within this health consultation should be disseminated to the community members and stakeholders within Tangipahoa Parish, Louisiana.

Preparers of this Report

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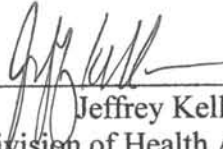
Jeff Kellam
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Agency for Toxic Substances and Disease Registry

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1. Agency for Toxic Substances and Disease Registry. Public Health Assessment: Delatte Metals, Ponchatoula, Tangipahoa Parish, Louisiana. Atlanta: US Department of Health and Human Services: 2005 Mar 30.
2. CH2M HILL, Inc. Hurricane Katrina Response: Delatte Metals Superfund Site, Louisiana, Site Inspection and Sampling Results. CH2M HILL Technical Memorandum 05-8256. 2005 Nov 4.
3. United States Environmental Protection Agency. Hurricane Katrina Evaluation Report for Delatte Metals Superfund Site. Tangipahoa Parish, Louisiana. 2005 Dec 15.
4. United States Environmental Protection Agency. Summary of Testing at Superfund National Priority List Sites. Accessed 28 Aug 2006 at URL: <http://www.epa.gov/katrina/superfund-summary.html#delatte>

Certification

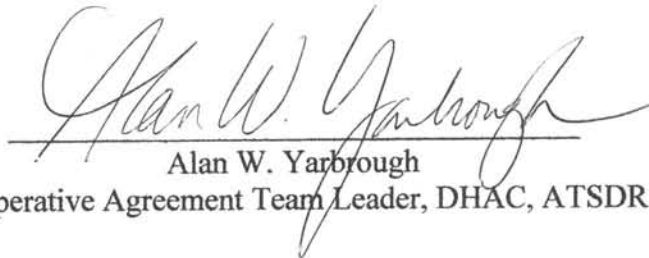
This Hurricane Response Sampling Assessment for the Delatte Metals Post-Hurricane Assessment public health consultation was prepared by the Louisiana Department of Health and Hospitals under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures at the time the health consultation was begun. The editorial review was conducted by the Cooperative Agreement Partner.



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



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APPENDIX A: Delatte Metals Post-hurricane Site Inspection Photographs*



DSCN1238-DM_front gate.JPG 2005/09/27 15:27:04



DSCN1239-DM_right from front gate.JPG 2005/09/27 15:29:02



DSCN1240-DM_from front gate.JPG 2005/09/27 15:29:07



DSCN1241-DM_from front gate.JPG 2005/09/27 15:29:13



DSCN1242-DM_from front gate.JPG 2005/09/27 15:29:18



DSCN1243-DM_from front gate.JPG 2005/09/27 15:29:24



DSCN1244-DM_from front gate.JPG 2005/09/27 15:29:29



DSCN1245-DM_monitoring well outside perimeter fence.JPG 2005/09/27 15:30:00

* Adapted from CH2M HILL, Inc. Hurricane Katrina Response: Delatte Metals Superfund Site, Louisiana, Site Inspection and Sampling Results. CH2M HILL Technical Memorandum 05-8256. 2005 Nov 4.

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DSCN1246-DM_tree down across fence.JPG 2005/09/27 15:35:40



DSCN1247-DM_tree down across fence.JPG 2005/09/27 15:36:26



DSCN1248-DM_PRB.JPG 2005/09/27 15:40:03



DSCN1249-DM_PRB.JPG 2005/09/27 15:40:30



DSCN1250-DM_tree down adj to well outside fence.JPG 2005/09/27 15:46:15



DSCN1251-DM_tree down on fence.JPG 2005/09/27 15:46:15



DSCN1252-DM_tree down on fence.JPG 2005/09/27 15:46:37



DSCN1253-DM_tree down on fence.JPG 2005/09/27 15:46:50

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DSCN1254-DM_Perimeter fence_some view barrier damage.JPG 2005/09/27 15:50:46



DSCN1255-DM_Perimeter fence_some view barrier damage.JPG 2005/09/27 15:50:46



DSCN1256-DM_creek.JPG 2005/09/27 15:50:46



DSCN1257-DM_front gate.JPG 2005/09/27 16:05:44



DSCN1258-DM_front gate.JPG 2005/09/27 16:06:10