Special Bulletin B - POLREP #5
Remacor, Inc., P.O. Box 366, Route 168,
West Pittsburg, Lawrence County, PA
Latitude: 40 degrees 56 minutes 5.892 seconds north
Longitude: 80 degrees 22 minutes 8.148 seconds west

DATE: January 30, 2007

FROM: Jack Downie, On-Scene Coordinator
Removal Response Section (3HS32)

TO: Regional Response Center, U. S. EPA Region III

SUBJECT: Notification of $250,000 Emergency CERCLA Removal Action at the Remacor, Inc. Site, West Pittsburg, Pennsylvania

ATTN: James J. Burke, Director
Hazardous Site Cleanup Division (3HS00)

Dennis Carney, Associate Director
Office of Preparedness and Response (3HS30)

Fran Burns, Chief
Western Response Branch (3HS32)

I. ISSUE

The On-Scene Coordinator (OSC) conducted a removal assessment in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (104)(b)(1) and 40 CFR Part 300 of the National Contingency Plan (NCP) of a magnesium processing plant named REMACOR , Inc. (REMACOR). The Site is located at the intersection of 9th and Industrial Streets (PA Route 168), West Pittsburg, Lawrence County, Pennsylvania, 16160. The Site is a former materials processing facility that was used to process secondary magnesium scrap into magnesium powder and granules for use in the steel industry. An estimated 3 million pounds of highly flammable and potentially explosive magnesium shavings, lesser volumes of other hazardous finely divided metals, process waste material and low level radioactive waste from the former processing of rare earth metal ores are present on the Site. The unsecured presence of these improperly stored hazardous materials poses an imminent fire, explosion and health hazard to the town of West Pittsburg which is located in the immediate downwind footprint of the Site. On September 13, 2006, the OSC pursuant to the re-delegation of Authority 14-2 authorized emergency action in the amount of $250,000 to initiate an emergency Removal Action to secure the Site with fencing, provide security and begin actions to prevent, minimize, stabilize or eliminate the threat of release. Continued response actions at this Site are necessary to address threats to human health, welfare and the environment posed by the presence of large quantities of unsecured and poorly stored reactive magnesium and magnesium

alloy turnings and cuttings, other hazardous finely divided metals, low level radioactive isotopes of thorium, cesium, radium, and potassium, and areas contaminated by waste materials including caustic calcium oxide and oil spillage from electrical equipment, scrap washing, and former plant processes. The hazardous materials will be further delineated, stabilized, removed, and/or otherwise disposed of via recycling, incineration or land filling.

The OSC has determined that the Site continues to meets the criteria for a removal action under Section 300.415 of the National Contingency Plan (NCP) and Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, (CERCLA), 42 U.S.C. § 9604. As a result of conditions, pursuant to Section 104 of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) as amended, 42 USC Section § 9604, continued emergency removal actions are needed at the Site. Pursuant to the re-delegation of Authority 14-2, the OSC has authorized an emergency action in the amount of $250,000 to continue an emergency removal action to prevent, minimize, stabilize or eliminate the release or threat of release. This will increase the total removal action ceiling to $500,000 of which an estimated $300,000 will be funded from Regional removal allowances. This allocation will enable Region III to continue to properly stabilize the facility and perform actions necessary to protect public health and welfare and to minimize releases of hazardous substances to the environment.

II. BACKGROUND

A. Site Description

The Site is located at the intersection of 9th and Industrial Streets in West Pittsburg, Lawrence County, Pennsylvania, 16160. The latitude and longitude are 40° 56' 5.892" and -80° 22' 8.148", respectively. The Site is identified on Tax Map No. 4120 as Parcels 119, 120, 124, and 131B as recorded on various deeds in the Office of the Recorder of Deeds for Lawrence County. The Site real estate is owned by Reactive Metals & Alloys Corporation ("RMA") but, during July and August 2006, was exposed to an Upset Sale for the non-payment of taxes. No one purchased the property during the sale and Lawrence County became trustee of the Site real estate. Lawrence County provided consent to EPA to access the property for testing purposes and to secure the property.

The Site encompasses 45 acres of relatively flat land and contains manufacturing buildings, office buildings, and waste processing and storage areas. The Site is located along a thin industrial tract of land in Taylor Township on the eastern bank of the Beaver River. Bordering the north side of the property is the 58,000 square foot Panella Company building which is a private entity, and just beyond, the Penn Power Plant. On the east side is the adjacent Taylor Township office, then Industrial Street, and beyond which is an active CSX rail line and the community of West Pittsburg. Several residential properties border the east side in the southern portion of the Site. On the south side is a field that has characteristic wetland features and a surface water impoundment. On the west side is the Beaver River which also acts as the boundary between Taylor and North Beaver townships.

The Taylor Township office has a workforce of six employees and is located in a highly vulnerable area adjacent to the Site entrance. Approximately five homes are located adjacent to

the eastern boundary in the southern portion of the Site. There are approximately 1,000 residents located within 4,000 feet of the Site with most of the residents living in the town of West Pittsburg located as close as 700 feet from the Site. According to the 2000 Census, the population of the West Pittsburg zip code area is 960 persons and the population of Taylor Township is 1,198 (see Attachment C, Population Map). The nearest schools to the Site are in the City of New Castle located approximately 2.5 miles to the north. The Beaver River is adjacent to the Site and is formed by the Shenango and Mahoning Rivers 1.8 miles to the north. The Beaver River is a tributary to, and confluences the Ohio River 17 miles to the south.

B. Site Background

The CERCLIS ID number for the Remacor, Inc. Site is PAD074965096. Remacor, Inc., (Remacor) is a materials processing business that has been in business for approximately 40 years at this location under several corporate names. The facility was used to process (a.k.a. recycle) secondary magnesium scrap into magnesium powder and granules for use in the steel industry as a desulfurization agent. Remacor received two types of materials that contained magnesium including (1) hazardous magnesium materials in the form of fines, turnings and shavings, and (2) magnesium materials in the form of solid magnesium scrap. The magnesium fines, turnings and shavings are ignitable and are classified by the U.S. DOT as Hazardous Materials. Remacor was paid to accept these materials for recycling from 26 known suppliers. The facility processed these materials by cleaning and mixing them with lime to produce magnesium granules that were supplied to the steelmaking industry. The processing at the plant generated magnesium and lime waste, magnesium oxide waste, lime waste, and process wastewater.

On August 6, 2005, there was a fire at the plant caused by the reaction of hazardous magnesium materials. The fire destroyed a 68,000 square foot building at the facility including equipment used by Remacor for processing magnesium materials. After the fire, Remacor continued to receive and accumulate hazardous magnesium turnings on the property without the means to process the material. Being paid to receive the materials was apparently their only known source of income. As a result, hazardous magnesium metal volumes at the Site continued to increase and raised the concerns of local, State and EPA officials that another fire and/or possible explosion was imminent.

On March 9, 2006, Taylor Township, Lawrence County, and PADEP officials conducted a meeting with Remacor representatives to address the growing concern of accumulating magnesium metal turnings at the Site. It was determined that Remacor did not own the property that the plant was on, that property taxes were not being paid, and that Remacor was operating without insurance coverage, albeit they were awaiting insurance claim monies to rebuild their operations. A Site inspection revealed that the perimeter fencing contained numerous openings and gaps, spillage and debris was evident everywhere, that a large volume of magnesium turnings was staged on the premises, that magnesium turnings were stored mostly in drums or supersack containers, that the containers were stored in buildings with leaky roofs or lacking doors, that placarding of hazardous material storage areas was not evident, that drums were mislabeled, that chemical runoff was observed in several locations, and that surface runoff was openly entering storm drains. Fire control equipment was not readily observed in many areas. PADEP requested assistance from EPA to evaluate the Site for potential removal action.

On April 27, 2006, PADEP and EPA On-Scene Coordinators (OSCs) conducted a walk-through of the Site and noted the following (see Attachment 1, Photos):

1. There was an almost total lack of security along the perimeter of the 45 acre Site. Security appeared to be limited to the main office area. It would be extremely easy to walk into the rest of the facility from all directions.

2. The nature and quantity (> 3,000,000 pounds) of stored reactive metals is of concern. Finely divided thin strips of magnesium (cuttings/shavings) alloyed with aluminum can be very reactive. An ignition source is of concern. Once a fire starts in this material, it is very difficult or impossible to extinguish with resources on hand.

3. The close proximity of the Taylor Township Municipal buildings and the community of West Pittsburg in the immediate downwind footprint of the facility puts hundreds of people at risk should a fire develop. Fire ignition sources can be spontaneous combustion from the oil soaked fabric tote bags, equipment, lightning and potential arson. The open access does not preclude neighborhood children from playing in the buildings or experimenting with burning magnesium.

4. Once a fire is initiated, the only strategy is to save adjacent buildings and outside storage areas containing magnesium cuttings. This puts the first responders and community at risk.

5. Finely divided magnesium mixed with water at high temperature can produce hydrogen gas, which is very explosive.

6. The August 2005 fire that consumed a 68,000 square foot building storing magnesium cuttings created a plume that went straight up. Different meteorological conditions such as an air inversion or a prevailing wind blowing into the community could have serious public health consequences.

7. There are other known hazards present at the facility including titanium and calcium shavings. Owing to the long history of the facility, other hazards exist, such as calcium oxide waste mixed with magnesium, that has caused fires at an off-site landfill.

On or about May 4, 2006, PADEP filed a Complaint and a Petition For Preliminary Injunction due to the threat posed by the Site. Remacor and PADEP agreed to enter into a Consent Decree that outlined a timetable with appropriate measures to be taken by Remacor. Court proceedings occurred in June 2006 and a Court Order was issued on August 17, 2006 requiring Remacor to comply by September 30, 2006 or face charges. EPA and PADEP began determination of the ability of Remacor to perform the necessary actions promptly and properly.

On August 22, 2006, PADEP Radiation Protection staff and a PADEP official conducted a radiation inspection of the facility. Radiation readings from naturally occurring thorium, potassium, and radium were identified. In addition, three drums of bag house dust were present that were preliminarily screened and potentially identified as containing low level amounts of cesium-137, a radioactive isotope that is formed mainly by nuclear fission. On the Site, gamma radiation was elevated in discrete areas up to 25 times the natural background level for the area.

EPA requested that the Agency for Toxic Substances and Disease Registry (ATSDR) conduct a health consultation based on findings at the Remacor facility. On September 8, 2006, ATSDR determined that a serious and significant hazard is present from the potential ignition of large quantities of magnesium metal by trespassers. It was determined that the Site poses a health hazard to the surrounding community from elevated radiation levels, and, coupled with high potential for fires, pathways of exposure include direct exposure to ionizing radiation and potential inhalation of smoke containing radioactive materials. Further, it was determined that there was potential for contamination of the Beaver River with radioactive materials. The ATSDR advised that access to the Site be restricted as soon as possible (see Special Bulletin A).

On September 13, 2006, the OSC conducted an emergency removal activation under Delegation of Authority 14-2. During September 15 to 27, 2006, activities conducted under the emergency removal action included securing the Site with 24-hour security services, repairing the perimeter fence, establishing runoff controls, marking and covering or excavating areas of elevated radiation, and conducting limited excavations in spill areas. During September and October 2006, EPA officials attended meetings with PADEP, local officials, Remacor CEO Joe Jackman, consultants, and independent investors regarding the issues resulting from the Site. During November 2006, EPA Cost Recovery and ORC drafted and delivered 104(e) letters to potentially responsible parties (PRP) including Remacor.

On 11/28/06, a Site walkover and review was conducted by EPA ERT and their contractor to observe the elevated radiation areas and provide recommendations for future radiation characterization. A Trip Report was provided to the OSC, dated January 3, 2007, that recommended a more thorough characterization of the Site and development of disposal options.

Currently, EPA is maintaining 24-hour, 7 days per week security guard service at the Site due to the presence of hazardous magnesium turnings and is addressing any interim security or stabilization issues that may surface. Methods for addressing the hazardous materials have been evaluated and EPA continues to coordinate with State and local officials regularly. A more comprehensive radiation survey with sampling is scheduled to be conducted by EPA in the near future.

EPA has received numerous responses to the 104(e) letters and is awaiting other PRP responses. To date, two suppliers have removed, or are in the process of removing, magnesium materials that were sold to Remacor.

C. Types of Substances Present

Magnesium or magnesium alloys with more than 50% magnesium in the form of pellets, turnings or ribbons are “hazardous substances”, as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). They are classified as flammable or reactive solids according to Appendix A, Section 172.101 of DOT, 49 CFR, and are classified as hazardous waste being an accumulated solid waste with characteristics of flammability and reactivity according to §261.21 and §261.23, 40 CFR. Reactive magnesium is the primary chemical of concern at the Site due to its high potential for fire and due to its volume, storage condition and flammability.

Inspections conducted by federal and State officials have identified approximately 3 million pounds of finely divided magnesium stored mostly in 1,000 pound supersack containers and in drums. The drums are poorly stacked in areas and in various states of deterioration. Some of the material is in locations where contact with water has or will likely occur. The Site has a history of fire (see Attachment A – Photos). During August 2005, a 68,000 square foot long processing building and processing equipment at the Site was consumed in a fire caused by reaction of flammable magnesium solid. Fortunately, favorable weather conditions allowed the plume to go straight up rather than impact the adjacent residential areas. Magnesium fires are very intense and difficult and dangerous to fight. A magnesium metal fire can react violently to applied water or foam and the intense light produced from a fire can cause eye damage. Wounds involving molten magnesium can be very slow to heal. As a result firefighters often focus on perimeter containment and protection of other nearby property and human life.

Other hazardous materials on Site include water reactive calcium oxide and oils from electrical equipment or scrap washings that has spilled onto soils. Preliminary field screening and identification plates on electrical capacitors and transformers indicate that the oils do not contain poly chlorinated biphenyls (PCBs). Low level radioactive sources are present at the Site that have been preliminarily identified as coming from concentrated naturally occurring thorium, radium, and potassium isotopes, contained in drums, buried slag and fire debris. Thorium has the most stringent inhalation limits per the Nuclear Regulatory Commission (NRC). Remacor, Inc. is not covered by NRC license. Further investigation will be required to determine the nature and extent of these contaminated areas.

D. National Priorities List

The Site is not on the National Priorities List.

E. State and Local Authorities Role

As explained above, EPA has worked closely with Pennsylvania's Department of Environmental Protection (PADEP) on environmental and human health concerns regarding the Remacor facility. PADEP issued a Consent Decree, monitored the activity of the responsible party, filed for Legal proceedings, and performed assessment work on the property. PADEP requested EPA assistance to mitigate the threats posed by the Site and no other State or local authorities have indicated the availability of resources to address the hazards or to conduct a removal action in a timely manner at the Site.

Lawrence County, Taylor Township, and West Pittsburg representatives have expressed concerns regarding the hazardous and uncontrolled nature of the Site, especially after experiencing the dangerous fire during August 2005. The County, who assumed guardianship of the property after the Upset Sale, has given EPA access to the Site in order to address these concerns. EPA, State, and local officials and representatives have met on several occasions and coordinated activities and information gathering to otherwise provide for a timely and effective response.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Section 300.415 of the NCP (40 CFR 300.415) lists the factors to be considered in determining the appropriateness of a removal action. Paragraphs (b) (2) (i), (ii), (iii), (v), (vi) and (vii) of Section 300.415 directly apply as follows to the conditions at the Remacor Site:

A. 40 C.F.R. § 300.415(b) (2) (i) — Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby human populations, animals, or food chain.

The Taylor Township Municipal Buildings are located at the entrance to the Site. The community of West Pittsburg is located directly east in the immediate downwind footprint of the Site. A significant volume of ignitable, pyrophoric magnesium is unsecured on Site and low level radioactive materials are present. The high risk of fire, combined with the presence of low level radioactive materials, presents a serious fire-fighting risk and inhalation hazard to first responders and the nearby population of West Pittsburg.

B. 40 C.F.R. § 300.415(b) (2) (ii) — Actual or potential contamination of drinking water supplies or sensitive ecosystems.

The Site is located on the left descending shoreline of the Beaver River. An inspection performed by PADEP and EPA revealed that the surface water runoff from the Site contains visible contamination and enters storm drains. A major fire would result in the use of large volumes of water to protect adjacent structures from an intense pyrophoric metal fire that would increase runoff and potential contamination of the Beaver River from process wastes and low level radioactive materials. The Beaver River confluences the Ohio River which supplies drinking water to a large population.

C. 40 C.F.R. § 300.415(b) (2) (iii) — Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release

Much of the magnesium hazardous material on Site, an estimated 3,000,000 pounds, is stored in drums and in supersacks. Many of the drums are stacked outdoors. Hazardous materials are stored in buildings that have leaky roofs or are without doors and are susceptible to becoming wet and unstable. Inspection by EPA and State officials noted the potential ease for which water could or has reached the hazardous material stock.

D. 40 C.F.R. § 300.415(b) (2) (v) — Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

Ignitable magnesium turnings, shavings and fines are stored in areas exposed to the weather. Chemical reactions have already caused a major fire and release of smoke and potentially dangerous particulate matter. Low level radioactive materials were detected in a waste pile on the property, exposed to the elements. Surface water was observed to be transporting Site contaminants. The materials and wastes on Site will, upon entrainment or dissolving into surface water, harmfully affect water quality.

E. 40 C.F.R. § 300.415(b) (2) (vi) Threat of fire or explosion.

Magnesium may spontaneously ignite on contact with air if finely divided or on heating. Upon heating, toxic fumes are formed. The substance is a strong reducing agent and reacts violently with oxidants and many other substances, causing fire and explosion hazard. The material reacts with moisture or acids, evolving combustible gas (hydrogen), causing fire and explosion hazard. In August 2005, a chemical reaction caused a fire that consumed an onsite building 68,000 square feet in area. There are reports of drums containing magnesium fines that have erupted more than once. Pyrophoric metal fires can be very difficult and dangerous to extinguish.

F. 40 C.F.R. § 300.415(b) (2) (vii) The availability of other appropriate Federal or State response mechanisms to respond to the release.

The PADEP requested EPA assistance to stabilize and secure the Site. The State does not have the resources available to conduct an emergency stabilization of the Site. No other State or local authorities have indicated the availability of resources to address the hazards or to conduct a removal action in a timely manner at the Site. The Site is not covered by a license from the Nuclear Regulatory Commission (NRC).

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances at this site, if not addressed by implementing the response action selected in this Special Bulletin, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS

A. Proposed Actions Description

a. Develop Site-specific health and safety measures, including preparation and implementation of a Health and Safety Plan ("HASP") for actions to be performed at the Site, to protect the health and safety of workers, other personnel and the public from the hazardous substances and work-related health and safety hazards during performance of the response action specified herein.

b. Continue to provide Site security sufficient to preclude access by trespassers or by persons not conducting or overseeing the response action.

c. Establish a support zone with administrative and communication capabilities.

d. Conduct an extent of contamination study detailing contamination present on Site. This study may involve inventory, multimedia sampling and analysis, field screening, and/or monitoring for organic, inorganic, and radionuclide contaminant sources, mapping, and reports.

e. Continue to conduct interim stabilization of hazardous materials and their storage environments until materials can be shipped off Site. This may require as necessary containerization or re-containerization of hazardous materials into proper shipping

containers, movement and/or isolation of hazardous materials from wet areas, ignition sources, incompatible materials, or unstable stacked configurations, repair of existing storage structures or construction of proper hazardous materials storage units, and placarding, labeling and otherwise demarcation of hazardous material storage areas.

f. The magnesium generators have been contacted and arrangements are being made for return of magnesium materials to the generators. If necessary, oversight of PRP activities on Site will be provided.

g. Provide transportation of properly packaged hazardous materials to another recycling facility and/or disposal facility.

h. Excavate or remove and dispose of gross organic, inorganic, and radionuclide contamination sources from buildings and soils to prevent human exposure and migration to groundwater or navigable waterways. Soil excavations will be restored to original grade with clean backfill as necessary.

i. Maintain sedimentation and erosion controls as necessary to prevent or eliminate offsite migration. Additional controls may be added as necessary.

B. Estimated Costs

The proposed distribution of funding is as follows:

Extramural Costs:	**Current Ceiling**	**Proposed Increase**	**Proposed Ceiling**
Regional Removal Allowance Costs:			
ERRS	$175,000	$125,000	$300,000
Other Extramural Costs Not Funded from the Regional Allowance:			
START	32,000	125,000	157,000
Unallocated	43,000	-0-	43,000
Total, Removal Action	250,000	$250,000	$500,000

Because the conditions at the REMACOR, Inc. Site continue to meet conditions set forth in Section 300.415 of the National Contingency Plan for an immediate removal, the OSC has initiated additional funding for this Removal Action.

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Jack L. Downie, OSC
U.S. EPA, Region III
Wheeling, WV 26003

Attachments:
Attachment A – Photos
Attachment B – ATSDR Consultation
Attachment C – Population Map (Census)

ATTACHMENT A

PHOTOS

ATTACHMENT A

Remacor Photos

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2006

Magnesium Site.jpg

Photo 1

Aerial photograph looking west at the Remacor Site (center) after the August 2005 fire. The Beaver River flows from north to south (right to left in photo) and borders the west side of the property. The close proximity of the town of West Pittsburg, PA is shown by the homes at the bottom of the photo. West Penn Power is shown at the far right center. The Taylor Township office complex is the brown-roofed building at the entrance to the center of the Site. The processing building that burned to the ground is shown as the long gray area located right of center and left of the building that has the white stained roof.

9/1/2006

smP9010012.jpg

Photo 2

Super sacks and other containers of hazardous magnesium turnings are exposed to water in several areas of the Site.

Photos by PADEP and EPA START

4/24/2006
P4240007.JPG

Photo 3

This 4/24/2006 photo is of a drum that blew open and was physically still hot at the time of this photo.

ATTACHMENT A
Remacor Photos
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9/1/2006
smP9010016.jpg

Photo 4

A pile of lime is observed under the tanks in the center of the picture. The lime leaked from the tank due to failure of the equipment and lack of maintenance. Stacked drums of placarded reactive magnesium turnings are shown at left and right.

9/5/2006
smP1010019.jpg

Photo 5

Magnesium turnings bagged and in placarded cardboard boxes are exposed to the weather in this building that has no doors. The stack of boxes at the far right is precariously leaning against the block wall of the building because the bottom box is crushed. There is stacking greater than three high.

ATTACHMENT A
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9/5/2006
smP1010017.jpg

Photo 6

This photo shows an outside drum storage area on Site. The upper tier of stacked drums is leaning because of the broken or badly deteriorated pallet beneath them.

9/5/2006
smP1010018.jpg

Photo 7

A cardboard container in poor condition is filled with suspect magnesium turnings and open to the weather in a location amidst stacked drums.

Photos by PADEP and EPA START

ATTACHMENT A
Remacor Photos
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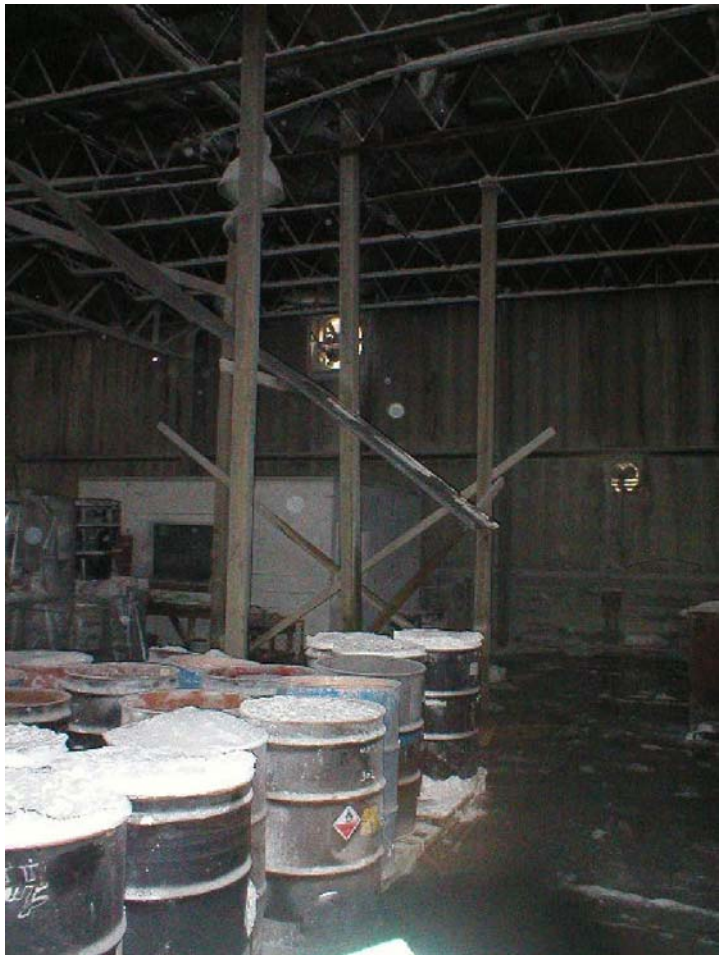

9/5/2006
smP1010021r.jpg

Photo 8

Photo is inside of a storage building on Site showing drums of reactive slag waste and a wet floor from water entering through the leaking roof. Tons of magnesium turnings were found in open sacks in this building.

9/21/2006
DSCN0897.JPG

Photo 9

Photo shows a leaking transformer on Site. Field screening tested negative for polychlorinated biphenyls (PCBs).

Photos by PADEP and EPA START

ATTACHMENT A
Remacor Photos
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9/26/2006
DSCN0910.JPG

Photo 10

Capacitors are piled in disarray and leaking in this building on Site. Preliminary investigation indicated that the leaking oil does not contain PCBs.

11/2/2006
DSCN0940.JPG

Photo 11

An EPA contractor begins to re-cover a pile that is emitting elevated levels of ionizing radiation. The cover was placed on the pile during the EPA Emergency Removal action and was subsequently blown off during high winds.

Photos by PADEP and EPA START

9/12/2006
Remacor_NASA_WorldWindAerial_2km.jpg

Photo 12

Black and white aerial photograph of the Remacor Site oriented north/south observed from a height of approximately 2 kilometers at a time before the 2006 fire. The Site is at center (crosshair) and the community of of West Pittsburg, PA is at right. The Beaver River runs from north to south across the photo left of center. Residential homes can be seen located adjacent to the southeastern portion of the Site. The bright white area above the crosshair at center is lime residue on the roof of a building near the lime tanks. South and adjacent to the lime tanks is the building that held process equipment that was consumed by the August 2005 fire.

Photos by PADEP and EPA START

ATTACHMENT B

ATSDR CONSULTATION

Health Consultation

Remacor Site
West Pittsburg, Lawrence County, Pennsylvania
EPA I.D. No. PAD074965096

Prepared by
Division of Regional Operations
and
Division of Health Assessment and Consultation

Table of Contents

Foreword

[Insert Foreword here]

Summary and Statement of Issues

Background

Site Description and History

The Remacor, Inc., (Remacor) facility has operated for about 40 years in West Pittsburg, PA. West Pittsburg is about 60 miles north of Pittsburgh and about 5 miles south of Newcastle, PA. Currently, it has recycled magnesium (Mg) scrap into powders and granules for the steel industry. The company received the Mg either as turnings, fines, shavings, or solid scrap. The turnings, fines, and shavings are ignitable. As a result of the Remacor processing, the plant generated magnesium and lime waste, magnesium oxide waste, lime waste, and process wastewater.

In August 2005, the Mg materials ignited resulting in a fire that destroyed a 68,000 square foot building at the facility including equipment used by Remacor for processing. Although no longer able to process the scrap, Remacor continued to collect and improperly store these materials [1]. Local and state officials became concerned. PADEP filed a court order to cease accumulating magnesium cuttings, improve storage conditions and begin recyclying and or reduce the amount of magnesium cuttings on site. Remacor continued to operate and was found in contempt of a court order to remedy deficiencies outlined in a State consent decree.

In March 2006 a site inspection found several hazards associated with the site including those associated with public health issues. These included the perimeter fencing needing repair, debris and spills widely dispersed on site, unsecured stored Mg materials in mostly drums or large super sack containers, that the containers were stored in buildings with leaky roofs or lacking doors, that placarding of hazardous material storage areas was not evident, that drums were mislabeled, that chemical runoff was observed in several locations, and that surface runoff was openly entering storm drains. Local officials notified both the Pennsylvania Department of Environmental Protection (PADEP) and the US Environmental Protection Agency (EPA). Further inspections identified the presence of radioactive materials on site.

In September 2006, the Agency for Toxic Substances and Disease Registry participated in a conference call with EPA and PADEP to discuss the radiation issues as well as the presence of the magnesium wastes.

On September 13, 2006, EPA initiated emergency removal actions and related actions including securing the Site with 24-hour security services, repairing the perimeter fence, establishing runoff controls, marking and covering or excavating areas of elevated radiation, and conducting limited excavations in spill areas. During these activities, additional levels of radioactivity were found. EPA requires additional time and monies to address the large volume of hazardous materials that are improperly stored at the Site and to conduct further evaluation of, and mitigation of, sources of ionizing radiation and contaminated soil, surface water and groundwater attributed to the site [1].

The primary concerns raised to ATSDR include the widely spread low level activity and large amount of poorly stored pyroforic materials, estimated to exceed over 3,000,000 pounds, that can become an inhalation hazard to the population downwind of the facility in the event of a fire [2].

Demographics

Based on information received from the EPA, the nearest residence is about 1/3 mile to the east; however, municipal buildings are adjacent to the site. The ATSDR Geographical Information Systems developed population information and that map is depicted in Figure 1.

Within one mile of the site, the population is about 1054, of which 1037 are White, 6 Black, and the remaining population consisting of American Indians, Native Americans Hawaiians, Asians, Hispanics, or other races. Included in this population are about 170 women of child-bearing age and about 85 children below the age of 6. These women and children comprise the population at greatest risk from exposure to the contaminants of concern identified at this site.

Community Health Concerns

At the present time, the health concerns expressed to ATSDR include the impact of another fire at the facility and the presence of radioactive materials.

Discussion

With regards to the radioactive contamination, the site is not covered by a license from the Nuclear Regulatory Commission (NRC); therefore, ATSDR has the authority to investigate the issues. According to the state, radiation readings in the waste pile can exceed 500 microRoentgens per hour [3]. A trespasser or worker will exceed the ATSDR Minimum Risk Level (MRL) of 100 millirem per year in as few as 200 hours. Workers are included in this category because the site is not licensed; therefore, workers are considered to be members of the public, not radiation workers. The radioactive materials tentatively identified at the site include cesium-137 and thorium-232.

Magnesium is a water-reactive metal and can pose a significant fire hazard. Hydrogen is released when Magnesium reacts with water. Magnesium fires are initiated by the ignition of the hydrogen, and once started, are extremely difficult to extinguish. Factors affecting the hazard and the rate of hydrogen production include the purity of the metal, size of the particles, amount of moisture present, temperature, and the degree of oxide coating on the metal. Pure magnesium in the form of a dust or powder represents a serious fire and explosion hazard [4].

Because the site is unsecured and the radiation levels exceed estimated background by as much 25 times, the site poses a health hazard to the surrounding community. Coupled with the high potential for fires, the potential pathways of exposure include direct exposure to ionizing radiation, potential inhalation of smoke containing radioactive materials (thorium has the most stringent inhalation limits per Title 10 Code of Federal Regulations Part 20). Other potential pathways that exist as a result of a fire include contamination of the stream with radioactive materials.

ATSDRATSDRATSDR

Child Health Considerations

In communities faced with air, water, or food contamination, the many physical differences between children and adults demand special emphasis. Children could be at greater risk than are

adults from certain kinds of exposure to hazardous substances. Children play outdoors and sometimes engage in hand-to-mouth behaviors that increase their exposure potential. Children are shorter than are adults; this means they breathe dust, soil, and vapors close to the ground. A child's lower body weight and higher intake rate results in a greater dose of hazardous substance per unit of body weight. If toxic exposure levels are high enough during critical growth stages, the developing body systems of children can sustain permanent damage. Finally, children are dependent on adults for access to housing, for access to medical care, and for risk identification. Thus adults need as much information as possible to make informed decisions regarding their children's health.

Conclusions

Recommendations

1. ATSDR agrees with EPA's assessment and recommends removal actions to mitigate exposure conditions at the Remacor Site, West Pittsburgh, Pennsylvania.
2. During a fire event, ATSDR recommends that the fire department use the typical/appropriate respiratory protection.

During a fire event, ATSDR recommends that the community be notified to shelter in place until notified by the local authorities.

Public Health Action Plan

No further actions are planned at this time once removal activities have been completed.

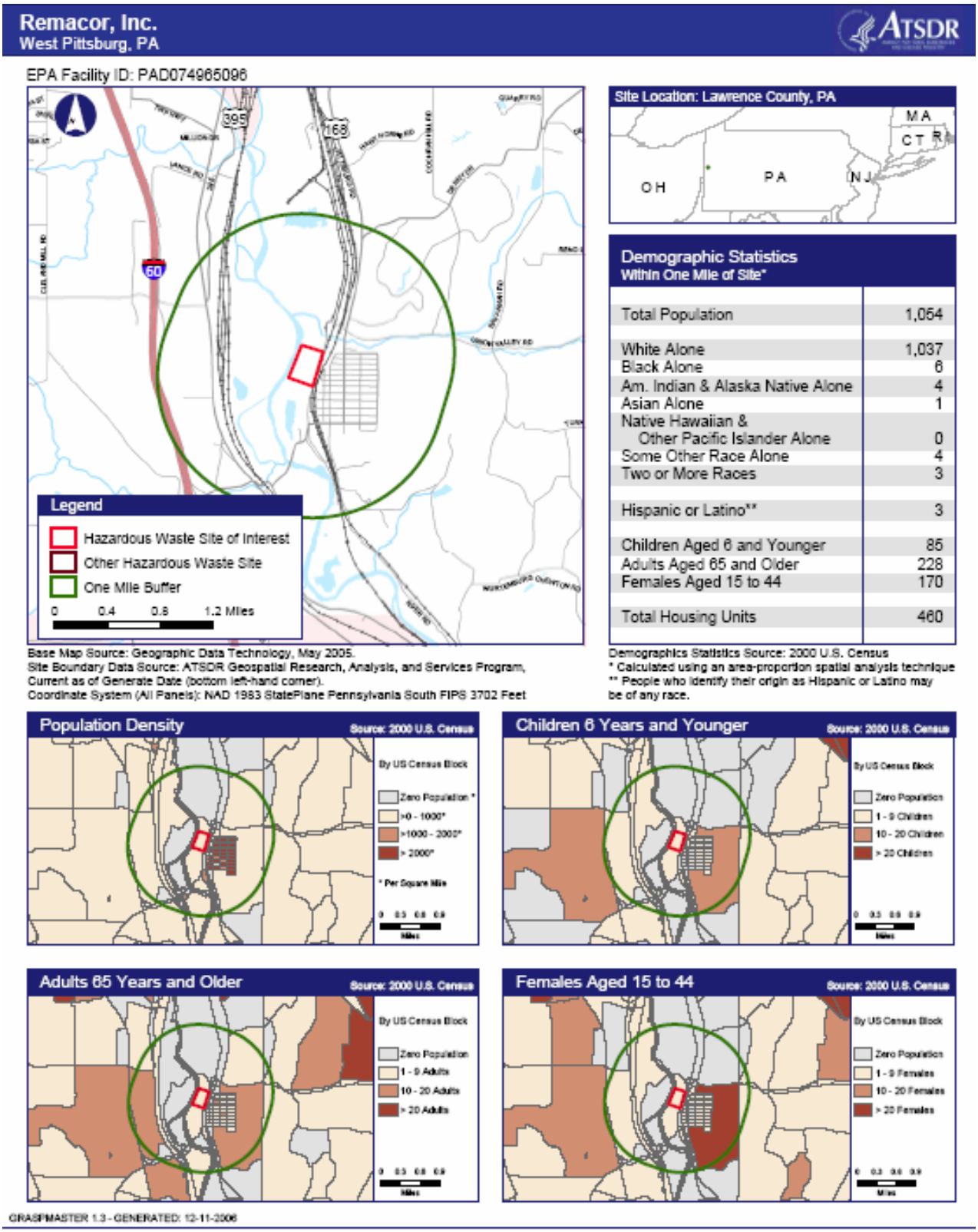

Figure 1. Demographics surrounding the RemacorSite

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References

1 Special Bulletin B - POLREP #5 from Jack Downie On-Scene Coordinator, US Environmental Protection Agency to James Burke US Environmental Protection Agency dated January 10, 2007.

2 Letter from Jack L. Downie, OSC. To Dan Holler, PADEP dated May 2, 2006

3 ATSDR Record of Activity dated September 9,2006 and prepared by Paul Charp, Division of Health Assessment and Consultation

4 ATSDR Record of Activity dated August 31, 2006 and prepared by Joe Little, Division of Toxicology and Environmental Medicine

ATTACHMENT C

POPULATION MAP (CENSUS)

ATTACHMENT C
Population Map - Remacor
U.S. EPA Special Bulletin B

U.S. Census Bureau
American FactFinder

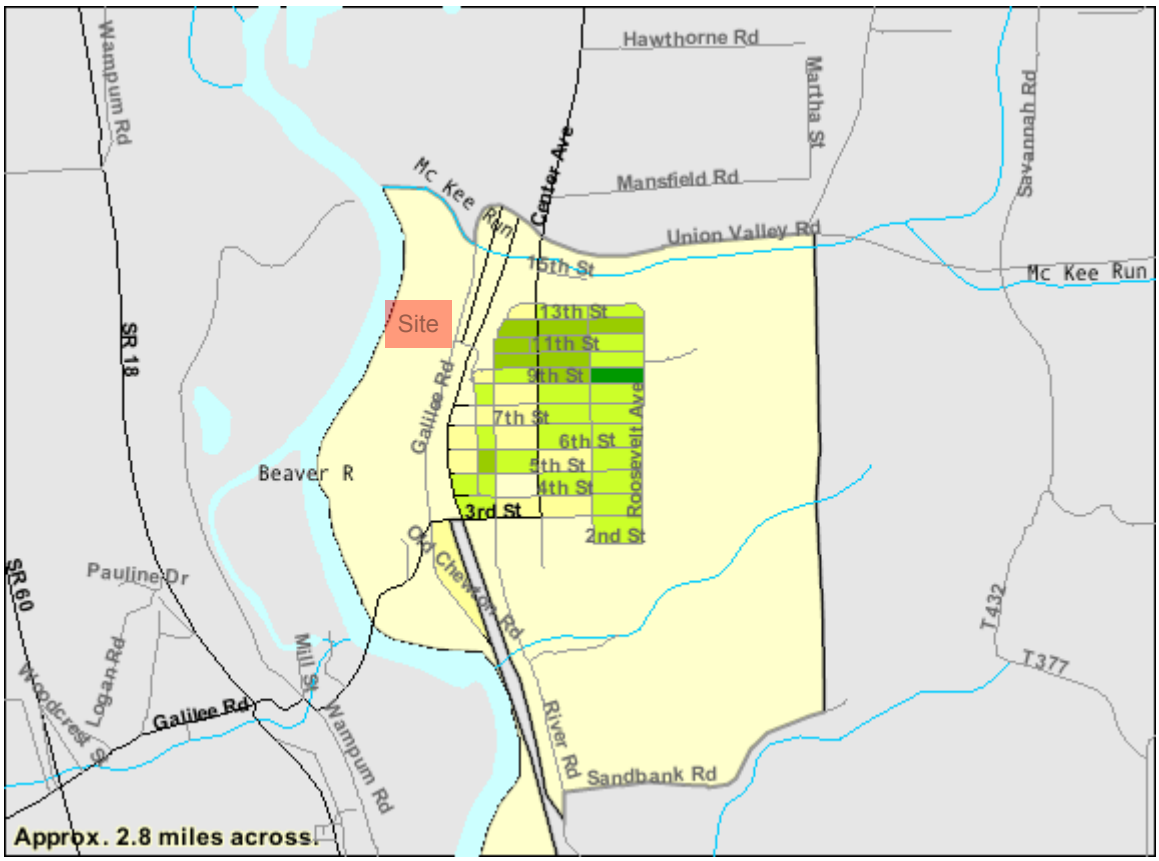
TM-P002. Persons per Square Mile: 2000
Universe: **Total population**
Data Set: **Census 2000 Summary File 1 (SF 1) 100-Percent Data**
16160 5-Digit ZCTA, 161 3-Digit ZCTA by Block

NOTE: For information on confidentiality protection, nonsampling error, definitions, and count corrections see http://factfinder.census.gov/home/en/datanotes/expsf1u.htm.

Legend

Data Classes
Persons/Sq Mile
0 - 750
1000 - 2200
2500 - 4000
5000 - 8250
11800 - 11800

Features
Major Road
Street
Stream/Waterbody
Stream/Waterbody



Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrix P1.