



Cleanup Work Planned For Laundry Plant

Grand Traverse Overall Supply Site
Greilickville, Michigan

November 2007

Share your opinions

EPA invites you to participate in both the short-term (removal) and the long-term (remedial) cleanup process at the Grand Traverse Overall Supply site. Your input helps EPA determine the best course of action. There are two opportunities for your opinions to be heard.

First, a public meeting on Thursday, Nov. 29, will discuss both the short-term removal and the long-term remedial cleanup activities at GTOS and give you a chance to ask questions or share your opinions. Second, a public comment period has been scheduled to run from Nov. 29 to Dec. 31, 2007. This period is for accepting written comments about the proposed long-term remedial cleanup plan that is presented in this fact sheet.

Comments about both the short-term removal project and the proposed long-term remedial cleanup plan can be expressed orally at the public meeting. To file written comments on the remedial component, you may fill out and mail or fax the enclosed form, use an electronic form on EPA's Web site, submit written comments at the meeting or make oral statements at the meeting that will be preserved by a court reporter. Your comments must be postmarked by the last day of the comment period.

Public comment period

Nov. 29 – Dec. 31 (midnight), 2007

Public meeting

Thursday, Nov. 29, 2007 at 6:30 p.m.
Elmwood Township Center Office
10090 E. Lincoln Road
Traverse City, Mich.

U.S. Environmental Protection Agency is planning both short- and long-term cleanup activities at the Grand Traverse Overall Supply site beginning later this year. Short-term cleanup work is done by EPA's "removal" program, while longer-lasting projects are conducted under the oversight of the Agency's "remedial" program. Removal cleanup work is done to quickly reduce potential threats to people's health that could arise should they become exposed to the pollution at the site. Remedial projects go through a much more involved planning and cleanup process to provide a permanent fix to the contamination at the location.

Remedial cleanups can require a number of years to implement because of all the studies and planning that need to be done even before actual cleanup work starts. Complex hazardous waste sites such as GTOS often contain both a removal and a remedial component. At the GTOS location, the removal program has already been working to contain the worst pollution threats and is planning additional cleanup late this year and early next year. Removal projects reduce potential threats to people's health while giving the remedial program time to come up with a permanent cleanup plan.

This fact sheet first describes the short-term removal cleanup work that will be performed later this year and early next year and then presents in detail a proposal for a long-term remedial cleanup project called a "proposed plan."¹ The public is encouraged to comment on this long-term proposal. EPA will be accepting comments from Nov. 29 to Dec. 31, 2007. Unlike the upcoming removal work, the regulations for the remedial cleanup project require an opportunity for public input regarding the proposed plan. The section of this fact sheet dealing with the proposed plan for remedial cleanup project will describe the various long-term cleanup options considered and identify EPA's preferred cleanup alternative. EPA also encourages the public to attend and participate in a public meeting Nov. 29 at the Elmwood Township Center Office at 6:30 p.m. where both the removal and remedial components of the GTOS cleanup will be discussed. EPA could alter its long-term proposed plan or even choose a new one based on public comments so your input is important. See the left-hand box to find out how you can participate in the cleanup process at GTOS.

¹ Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act requires EPA to provide an opportunity for a public meeting and hold a comment period. It also requires a newspaper ad announcing the proposed plan and a brief analysis. This mailer summarizes the feasibility study and other site-related reports available in the Traverse Area District Library and EPA office in Chicago.

About the Grand Traverse Overall Supply site

The GTOS location was an industrial laundering and dry cleaning facility covering 2 acres in Greilickville, Leelanau County, Mich. The on-site building remains in place but is not used. Industrial laundering began at the site in the early 1950s, and dry-cleaning machines were installed and used from 1968 through 1987.

About 1,200 people live within three miles of the site. There is a residence located within the site boundaries and another residence is located immediately adjacent to the western boundary of the site. The GTOS property is located directly west of Norris Elementary School. Cedar Lake, Cedar Creek, and Grand Traverse Bay are all less than 2,000 feet away from the site. Cedar Creek, the outlet of Cedar Lake, flows along the northern property line of the site. Cedar Lake and Grand Traverse Bay are used for swimming and other recreational activities.

For parts or all of the period from the mid-1950s until 1977, the facility used a dry well, a discharge pipe to Cedar Creek, and several lagoons to discharge wastewater from laundering and dry-cleaning operations at the site. In 1977, the facility began discharging wastewater to the sanitary sewer system. In 1978, studies showed that ground water in the area was contaminated with VOCs or volatile organic compounds, including the ground water underneath Norris School, and the water in Cedar Creek was of poor quality because of contaminants from the site. In the late 1970s, the well, lagoons and contaminated soil were removed.

A study done by Michigan Department of Natural Resources in 1981 showed the ground water was still contaminated. In 1983, the GTOS site was included on the National Priorities List. The sites on this list are among the nation's most hazardous waste areas and are eligible for cleanup under the EPA Superfund program. In 1987, a private study showed that while the ground water was still contaminated, the amount of contamination in the ground water had declined.

EPA conducted a remedial investigation during the period 1989 through 1991, including the dry well, the lagoons, Cedar Creek and the ground water. This remedial action did not investigate soil under the on-site building. While contaminants were found in soil and in the ground water, the amounts were generally low. Based on the results of this remedial investigation, EPA decided in a document called a

“record of decision” that no cleanup action was needed to be taken at the site.

In 1995 and 1996, a prospective operator of the GTOS property completed sampling of soil beneath the building, sampling of water in two sumps in the floor of the building, and sampling of water in the on-site well. The study identified VOC contamination in the soil samples from beneath the building and in the water samples taken from the sumps in the floor. Only low levels of VOC contamination were found in the ground water sample.

In 2001, Michigan Department of Environmental Quality completed installation of monitoring wells in the area, and samples taken from the wells showed ground water was contaminated. This information was shared with EPA and in 2005 and 2006 further ground water investigation work was completed and confirmed that not only was the ground water contaminated beneath the GTOS property, but contaminated ground water had also spread to beneath Norris Elementary School and was moving toward Grand Traverse Bay.

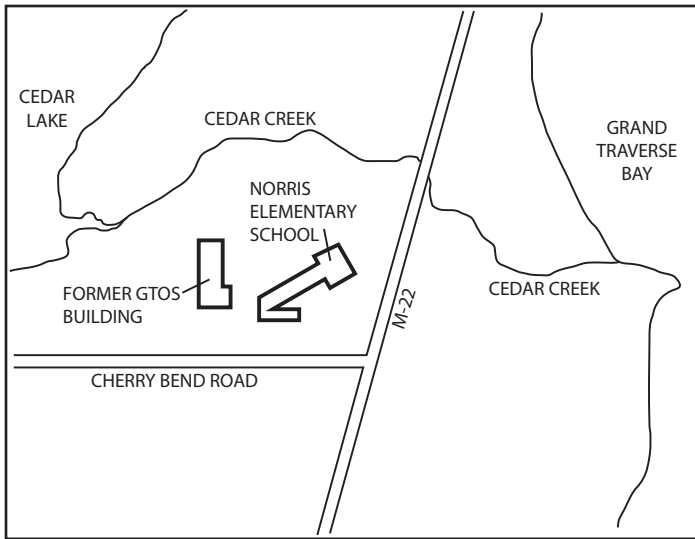
Soil vapor intrusion problem

Because of the ground water contamination under Norris School, EPA was concerned about the possibility of “vapor intrusion.” This problem occurs when contaminants dissolve in ground water and vaporize and then move up through the soil to seep into building foundations or crawl spaces. Volatile organic compounds are especially prone to this type of problem. EPA conducted a vapor study and determined there was a need to install a soil vapor extraction system around the school to stop trapped gases from entering the school building and causing an indoor air pollution problem. EPA installed the soil vapor extraction system in 2005.

In addition, a soil vapor intrusion study conducted at the on-site building documented that soil vapor contaminants were present in the building.

Removal project beginning later this year

Additional EPA cleanup activities under the removal program are planned at the GTOS site beginning in early December. The removal program has already overseen the installation of a vapor abatement system at the nearby Norris Elementary School. In the latest project, the GTOS building and the contaminated soil beneath and around the building will be removed to address potential threats to human health and the environment and to lessen the amount of contamination



This map shows the location of the Grand Traverse Overall Supply property and the proximity of Norris Elementary School. Much of the long-term cleanup plan proposed for the site is designed to protect students and staff at the school from pollution originating at the GTOS site.

that will have to be cleaned up in the long-term remedial project described later on this page. A fence will also be installed around the site to protect the public and students at the nearby school.

Neighbors can expect to see increased truck traffic during some of the removal activities. EPA needs to demolish the building and remove contaminated soil during this school year because the pollutants continue to move away from the site, and funds are available now to do the work. However, EPA will work closely with the school administration to schedule activities to coincide with school breaks and make sure there is as little disruption as possible to students and teachers.

Short-term removal cleanup activities

EPA will begin removal cleanup activities in early December by first removing all of the waste material in the GTOS building. This includes mercury switches, light ballasts, and liquids and sludge found in pits and trenches inside the building. The structure will be demolished starting immediately after Christmas unless severe weather delays the work. During demolition, trucks will be moving the demolition debris off-site and residents may notice an increase in traffic during this time. EPA picked this time frame so the majority of the demolition will occur when school is not in session, but some transportation activity will likely have to be done in January while students are in school. EPA will work with the school administration to make sure trucks are not moving in or out of the site when classes are starting or dismissing. EPA will

conduct air monitoring and sampling to make sure that dust and other particles are not released during demolition activities. The Agency will take protective measures such as dust control with water misting to prevent dust and other air particles from traveling off-site.

Next January and February samples will be collected to determine how much soil is actually contaminated. This will be done using small drill rigs and will not cause a major increase in traffic at the facility. Sometime after that, the building slab and contaminated soil beneath the slab will be removed. Exact dates are not yet known, but EPA will consider weather and school breaks when deciding the dates. In some areas, the soil will be removed down to the level of the ground water, which could be as deep as 17 feet. The soil will be temporarily stored in piles or in roll-off box containers at the site. Trucks will move this soil to appropriate disposal facilities, causing another spike in truck traffic. EPA will again work with the school to make sure the traffic does not pose a hazard. In addition, dust will be controlled and air monitoring conducted. If necessary, foam will be used to suppress any vapors that may be trapped in the deeper soil and which could be released during the removal activities. Once the contamination is removed, the areas will be filled with clean soil.

Remedial cleanup plan proposed for site

EPA evaluated several options to permanently clean up the site, ground water and the nearby school property. As described above, EPA will demolish the GTOS building and remove contaminated soil during the removal phase, which will serve as a head-start for the remedial phase. In the proposed long-term cleanup plan, EPA wants to pump contaminated ground water and clean it through a treatment method called air-stripping that will remove the contaminants and then pump the treated ground water to the public water treatment plant or Cedar Creek. EPA’s preferred cleanup proposal is a combination of soil Alternative 2A and ground water Alternative 3 described on Pages 5-6. As part of its long-term cleanup plans for the site, the Agency also proposes to continue operating the vapor extraction system already set up at Norris School. EPA believes this proposed plan protects human health and the environment and is designed to reduce pollutant levels so the site can once again be safely used.

Evaluation criteria

EPA uses nine criteria to compare cleanup options:

1. **Overall protection of human health and the environment** addresses whether an alternative adequately protects both human health and the environment. The cleanup plan can meet this criterion by reducing or eliminating contaminants or by reducing exposures to them.
2. **Compliance with applicable or relevant and appropriate requirements** assures that each project complies with federal, state and local laws and regulations.
3. **Long-term effectiveness and permanence** evaluates how well an option will work in the long term, including how safely remaining contaminants can be managed.
4. **Reduction of toxicity, mobility or volume through treatment** addresses how well the option reduces the toxicity (the chemical makeup of a contaminant that makes it dangerous), movement and amount of contaminants.
5. **Short-term effectiveness** is how quickly the project achieves protection, as well as its potential to be harmful to human health and the environment while it's being constructed and operated.
6. **Implementability** evaluates the technical feasibility of the cleanup plan, and whether materials and services are available to carry out the project.
7. **Cost** includes estimated capital or startup costs, such as the cost of buildings, treatment systems and monitoring wells. The criterion also considers costs to implement the plan, and operate and maintain it over time. Examples include laboratory analysis and personnel to operate equipment.
8. **State acceptance** is whether the state environmental agency, in this case the Michigan DEQ, agrees or disagrees with EPA's recommended alternative.
9. **Community acceptance** evaluates how well the community near the site accepts the option. EPA evaluates community acceptance after it receives and evaluates public comments on its recommended alternative.

As mentioned before, the public has 30 days to file written comments on EPA's proposed remedial plan. But remember, the written comments do not involve the upcoming short-term removal project. People attending the Nov. 29 public meeting can ask questions or voice concerns about any phase of the short-term removal project or the proposed plan for the long-term remedial project, but written comments are reserved for the proposed plan for the long-term remedial project presented in this fact sheet. EPA could alter its proposed remedial plan or even choose a new one based on public comments so be sure to participate.

As part of the remedial process, EPA conducted a major pollution investigation in and around the GTOS property. The investigation produced documents called the "remedial investigation" (also known as the site Investigation Report) and the "feasibility study," (including the feasibility study addendum). These

reports describe what is known about the pollution at the GTOS site and propose various options for fixing the problems. A site "risk assessment" was also done and explains the potential health risks to people and the environment. These documents are available at the Traverse Area District Library, 22 Sixth St., Traverse City, and will also be posted on EPA's Web site at www.epa.gov/reg5oopa/sites/grandtraverse/index.htm in the near future.

Health risks to people and the environment

Currently, the GTOS property is unused and nearby residents do not get their drinking water from the impacted area. The analysis performed during the risk assessment concluded that if nothing was done at the site and the current conditions didn't change (the site remained unused), there would be no current elevated health risk from the pollution to nearby residents, fishermen in Grand Traverse Bay, and teachers and

students at Norris Elementary school. Plants and animals were also found to be risk-free.

But problems would arise in the future if the GTOS building was used for business or was removed and houses built on the site without any cleanup. Also, if wells were sunk on the property or were sunk in areas east of the GTOS site where contaminated ground water from the site has moved and the water used for drinking, people would be exposed to contaminants. Health risks would primarily be to residents or site workers who drink or shower using the ground water or inhale vapors from the contaminated soil or from contaminated ground water. The main contaminants of concern are called volatile organic compounds and include dry cleaning chemicals such as tetrachloroethylene or (PCE) and trichloroethylene (TCE). Depending on how much and how long one is exposed, these VOCs can cause cancer and liver problems in humans and animals. People are not currently using the contaminated ground water at the site for drinking, but if they did drink the contaminated ground water over an average 70-year lifetime, they would be at risk of developing these illnesses. EPA's proposed plan outlined in this fact sheet is designed to reduce these risks.

Recommended cleanup options

EPA considered a number of options for managing and cleaning up the contaminated soil, ground water and soil vapor. The Agency evaluated each option against nine criteria required by law (see box P. 4 for an explanation of the criteria). These options have not

yet been evaluated for state and community acceptance because these criteria are typically judged after EPA proposes a remedy and conducts a public comment period. The options presented here provide the best balance of the nine criteria and meet the requirements of federal law. They protect public health and the environment over the long term, comply with state and local regulations and are cost-effective. Full details of site investigation work and the options to address the soil and ground water contamination are provided in the site investigation and feasibility study on EPA's Web site and at the Traverse Area District Library.

Cleanup options for soil

EPA considered five soil cleanup options or alternatives. Each alternative, except the no action alternative, includes preparing the site, using fencing to control access to the site, and site restoration or land-use controls, such as municipal zoning or other ordinances, covenants, or easements where necessary. These alternatives are summarized below:

Alternative 1 – No action: Nothing would be done to clean up or monitor the contamination. EPA always includes a no-action option for comparison purposes.

Cost: \$0

Alternative 2A– Limited action with excavation (EPA's recommended alternative): This option assumes that the building is demolished and most of the contaminated soil is already removed (from the short-term removal project described at the beginning of this document) but some pollutants remain. This option

Soil

Evaluation Criteria	Alt. 1	Alt. 2A	Alt. 2B	Alt. 3	Alt. 4
Overall Protection of Human Health and the Environment	☐	■	❖	■	❖
Compliance with ARARs	☐	■	■	■	■
Long-Term Effectiveness and Permanence	☐	■	❖	■	❖
Reduction of Toxicity, Mobility, or Volume through Treatment	☐	☐	■	☐	■
Short-Term Effectiveness	☐	■	❖	■	❖
Implementability	■	■	❖	■	☐
Cost	\$0	\$210,000	\$260,000	\$1.2 M	\$800,000
State Acceptance	Will be evaluated after the comment period.				
Community Acceptance	Will be evaluated after the comment period.				

■ = Meets Criteria

☐ = Does Not Meet Criteria

❖ = Partially Meets Criteria

Ground Water

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3
Overall Protection of Human Health and the Environment	□	❖	■
Compliance with ARARs	□	❖	■
Long-Term Effectiveness and Permanence	□	❖	■
Reduction of Toxicity, Mobility, or Volume through Treatment	□	■	■
Short-Term Effectiveness	■	■	■
Implementability	■	■	❖
Cost	\$0	\$470,000	\$1.8 M
State Acceptance	Will be evaluated after the comment period.		
Community Acceptance	Will be evaluated after the comment period.		

■ = Meets Criteria

□ = Does Not Meet Criteria

❖ = Partially Meets Criteria

includes removal of the remaining contaminated soil. Some areas would have to be dug up to at least 9-feet deep. Once all of the contaminated soil is removed, the excavated areas would be filled with clean soil and stabilized. **Cost: \$210,000**

Alternative 2B – Limited action with soil vapor extraction (SVE): This option assumes that the building is not or cannot be demolished and most of the contaminated soil is already removed but some remains. This option includes covering contaminated soil with an asphalt cap and using a treatment process known as SVE that uses vacuum wells to remove hazardous gases from the soil. The gases are then treated using activated carbon at an existing treatment system already being used at the Norris Elementary School. **Cost: \$260,000**

Alternative 3 – Demolition and excavation: This option assumes that none of the contaminated soil has been previously removed and the building can be demolished. The entire building would be removed, and all of the contaminated soil underneath the building would be removed. **Cost: \$1.2 million**

Alternative 4 – No demolition and SVE: This option assumes that none of the contaminated soil has been previously removed, and the building is not or cannot be demolished. This option includes using SVE to remove hazardous gases from the soil and treat them. **Cost: \$800,000**

Cleanup options for ground water

EPA evaluated three ground water cleanup alternatives to go along with different soil cleanup options. Each

alternative, except the no action alternative, includes installing and maintaining monitoring wells and completing long-term monitoring of the ground water as necessary. These alternatives are summarized below:

Alternative 1 – No action: Nothing would be done to clean up or monitor the ground water contamination. EPA always includes a no-action option for comparison purposes. **Cost: \$0**

Alternative 2 – Limited action with contingency for active remediation: This option includes institutional controls, such as not allowing drinking water wells to be drilled into the contaminated area, and monitoring of ground water contamination to see if natural processes such as dilution, decay and evaporation are cleaning up the contamination. If monitoring shows that contamination in the ground water is not being cleaned up by natural processes, then ground water would be pumped to the surface and treated as described in Alternative 3. **Cost: \$470,000**

Alternative 3 – Ground water extraction, treatment, and discharge with contingency for on-site treatment (EPA's recommended alternative): This option cleans the contaminated ground water by pumping it into a pressurized vessel and then forcing a high pressure stream of air through the water, causing the pollutants to evaporate. The cleaned ground water would then be sent to the public water treatment plant or Cedar Creek. This option also includes institutional controls and monitoring of ground water contamination to see

Norris Elementary School

Evaluation Criteria	Alternative 1	Alternative 2
Overall Protection of Human Health and the Environment	☐	❖
Compliance with ARARs	☐	❖
Long-Term Effectiveness and Permanence	☐	❖
Reduction of Toxicity, Mobility, or Volume through Treatment	☐	■
Short-Term Effectiveness	■	■
Implementability	■	■
Cost	\$0	\$350,000
State Acceptance	Will be evaluated after the comment period.	
Community Acceptance	Will be evaluated after the comment period.	

■ = Meets Criteria ☐ = Does Not Meet Criteria ❖ = Partially Meets Criteria

if contamination is being reduced by these actions and natural processes. **Cost: \$1.8 million**

Cleanup options for Norris Elementary School

EPA evaluated two cleanup alternatives for the Norris Elementary School:

Alternative 1 – No action: Nothing would be done to prevent vapors from entering the school building. EPA always includes a no-action option for comparison purposes. **Cost: \$0**

Alternative 2 – Continued operation of the SVE system (EPA's recommended alternative): This alternative assures that the SVE system currently operating at Norris School would continue to operate and be maintained for as long as it was required. Extracted vapors would continue to be transported to the existing treatment facility located between the GTOS building and Norris School and treated with activated carbon using the existing system to remove the contaminants before the treated vapor is discharged to the atmosphere. **Cost: \$350,000**

Evaluation of alternatives

Each of the soil, ground water and Norris Elementary School cleanup options was evaluated against the nine criteria set by Superfund law (see three evaluation charts P. 5-7). EPA picked its preferred cleanup alternatives based on the following justifications:

Soil options

EPA recommends demolishing and removing the GTOS building and digging up and removing all of

the contaminated soil under and around the building (Alternative 2A). The demolishing and removal of the GTOS building and excavation and removal of contaminated soil will be completed by EPA's removal program as described earlier in this fact sheet. It is hoped that after both the EPA removal and remedial programs have completed their cleanup work, the site will be available for future reuse. EPA liked soil Alternative 2A because it meets most of the evaluation criteria and is the most conservative and protective option. EPA decided the "no action" alternative for contaminated soil would not protect people or the environment and was eliminated from consideration. Alternative 3 would provide the same degree of long-term protection from exposure to pollution as Alternative 2A, but this action would no longer be required because the EPA's removal program is addressing the on-site building and contaminated soil. Alternatives 2B and 4 would not be as effective in protecting human health and the environment as Alternatives 2A and 3. In addition, Alternatives 2B and 4 would not be necessary because of the actions being taken by the removal program to remove the building and most of the contaminated soil on-site.

Ground water options

EPA recommends pumping up and treating the contaminated ground water (Alternative 3). The water would be tested, and if the cleanup was not working, bacteria or chemicals that break down the contamination would be added to ground water to clean it before it is pumped up for further treatment. The cleaned ground water would be sent either to the public water treatment plant or Cedar Creek.

Alternative 3 was judged best of all the options because it meets the most evaluation criteria. Pumping and treating the ground water in Alternative 3 would be effective in protecting human health and the environment. EPA has decided the “no action” alternative for contaminated ground would not protect human health if the site was to have a future use. Alternative 2 is also not as effective at protecting human health and the environment as Alternative 3.

Norris Elementary School options

EPA recommends continued operation and maintenance of the existing soil vapor extraction system previously put in place to handle vapors accumulating under the school building (Alternative 2). It is recommended this system be operated until it is no longer needed to keep vapors from accumulating under the school building and entering the building. Alternative 2 meets all the evaluation criteria required by the Superfund law while the no action option would not protect people or the environment.

Next steps

EPA will review statements received during the public comment period and at the public meeting before making a decision on the proposed cleanup plan. Based on new information presented in the comments, EPA may modify its proposed plan or select another of the cleanup options outlined in this fact sheet. EPA encourages you to review and comment on the proposed cleanup plan. Much more detail on the cleanup options is available in the official documents on file at the Traverse Area District Library or EPA’s Web page.

EPA will respond to the comments in a file called a responsiveness summary. This will be part of a document called the record of decision that describes the final cleanup plan for the site. The Agency will announce the selected cleanup plan in a local newspaper and will place a copy on file in the information repository at the Traverse Area District Library.

For more information

If you have any questions or need special accommodations for the meeting contact:

Don de Blasio
EPA Community Involvement Coordinator
312-886-4360 or 800-621-8431, 10 a.m. – 5:30 p.m., weekdays
deblasio.don@epa.gov

For questions on the long-term remedial cleanup phase contact:

Linda Martin
Remedial Project Manager
EPA Region 5 (mail code SR-6J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590
Voice: 312-886-3854
Fax: 312-886-4071
martin.lindab@epa.gov

For questions on the removal cleanup phase contact:

Michelle Jaster
On-Scene Coordinator
EPA Region 5
9311 Groh Road
Grosse Ile, MI 48138
Voice: 734-692-7683
jaster.michelle@epa.gov

Need more information?

Grand Traverse Overall Supply site EPA Web page: www.epa.gov/reg5oopa/sites/grandtraverse/index.htm
Official documents about the site can be viewed at the Traverse Area District Library, 22 Sixth St., Traverse City, Mich.



GRAND TRAVERSE OVERALL SUPPLY SITE
Cleanup Work Planned For Laundry Plant

Public Comment Sheet

EPA is interested in your comments on the proposed cleanup plan for the Grand Traverse Overall Supply site. You may use the space below to write your comments, then fold and mail the form. Or, you may submit comments on your own paper. **Comments must be postmarked by Monday, Dec. 31, 2007.** You may submit your comments to Linda Martin at martin.linda@epa.gov or fax to 312-353-1155. You can also submit comments on the Web at <http://www.epa.gov/reg5ooopa/sites/grandtraverse/index.htm>.

If you have any questions, please contact Linda Martin at 312-886-3854.

Name: _____
Affiliation: _____
Address: _____
City: _____
State: _____ Zip: _____

**GRAND TRAVERSE OVERALL SUPPLY SITE
PUBLIC COMMENT SHEET**

Detach this page, fold on dashed lines, staple, stamp, and mail

Name _____
Address _____
City _____
State _____ Zip _____

FIRST CLASS

Linda Martin
EPA Remedial Project Manager
EPA Region 5 (mail code SR-6J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590