



January 30, 2008

**Hand Delivered**

Ms. Kathryn J. Sather, Director  
Remediation Division  
Minnesota Pollution Control Agency  
520 Lafayette Road  
St. Paul, MN 55155-4194

Subject: Settlement Agreement and Consent Order (SACO), May 22, 2007  
October 1 – December 31, 2007 Progress Report

Dear Ms. Sather:

In accordance with Part XIII.A of the subject Consent Order, 3M has prepared and enclosed a progress report summarizing key activities for the time period from October 1 through December 31, 2007 and outlining actions anticipated for January - March 2008.

If there are any questions or comments concerning this matter, please contact me at the above address or call me at (651) 778-5150.

Sincerely,

A handwritten signature in black ink that reads "Gary A. Hohenstein".

Gary A. Hohenstein  
Environmental Manager, Special Projects  
Building 42-2E-27

Enclosure

## Settlement Agreement and Consent Order

3M and MPCA, May 22, 2007

### QUARTERLY PROGRESS REPORT #3

October 1 – December 31, 2007

On May 22, 2007, 3M and the Minnesota Pollution Control Agency (MPCA) entered into a Settlement Agreement and Consent Order (Consent Order) for the investigation and assessment of fluorochemicals (FCs) at sites in Washington County and for the execution of certain other related matters. This report is provided to fulfill the requirement outlined in Part XIII.A of the Consent Order.

**REPORTING PERIOD:** October 1, 2007 to December 31, 2007

#### **ACTIVITIES COMPLETED:**

##### Remedial Investigations (Part VI) and Feasibility Studies (Part VII)

Given the interrelatedness of the remedial investigation (RI) work and the feasibility studies (FS), these sections have been combined with the intent of providing a simpler, more straightforward update.

##### **Cottage Grove**

3M had previously submitted (July 20, 2007) a Feasibility Study Field Activities Work Plan for the site. Areas included in this plan included a geophysical survey, confirmatory soil borings, a groundwater recovery well evaluation, a biological inventory of the East Cove area and identification of possible permits/approvals. The field work associated with the geophysical survey and the soil borings was completed during the July-September 2007 timeframe. The entireties of all the activities outlined in the Work Plan were completed in the October-December 2007 period.

3M began preliminary discussions with representatives from Burlington Northern Santa Fe Railway, the Minnesota Department of Natural Resources and the U.S. Army Corps of Engineers concerning potential approvals that may be required for remedial activities in the vicinity of the East Cove at the site. All of these stakeholders have expressed willingness to work with 3M on this project.

Work continued towards completion of the FS Report, due for submittal by March 13, 2008.

## Oakdale

3M had previously submitted (July 20, 2007) a Feasibility Study Field Activities Work Plan for the site. Areas included in this plan included collection and analysis of a groundwater sample, a geophysical survey, confirmatory soil borings and a groundwater recovery well evaluation. The field work associated with these activities was completed during the July-September 2007 timeframe. The entireties of all the activities outlined in the Work Plan were completed in the October-December 2007 period.

Installation of a temporary fence on the north side of Highway to secure the site was completed the week of December 3, 2007. 3M had previously conferred with city officials concerning this matter and completed a field survey in anticipation of construction. Personal letters were also sent to approximately sixty nearby residences to inform them about the fence and the upcoming public meeting.

A public meeting was held on December 5, 2007 at Skyview Middle School, 1100 Heron Avenue, in Oakdale for the purpose of informing interested individuals about results from the Remedial Investigation and seeking their input concerning alternatives under consideration for the Feasibility Study. The format for the meeting included a one-hour, informal poster session followed by a one-hour general session that included presentations and a time for questions and answers. Approximately 80 people attended and a constructive dialogue took place concerning options being evaluated and issues of interest to the public.

## Woodbury

The field assessment of the former Main Disposal Area and Municipal Disposal areas was completed during the week of October 1, 2007. The work was performed as defined in the Addendum to the FC Assessment Work Plan and included modifications as detailed in the MPCA letter dated September 4, 2007. A Minnesota licensed surveyor located and staked the borings as presented in the Addendum to the FC Assessment Work Plan on October 1, 2007. A Geoprobe rig was used to complete 18 borings in these areas. Soil samples were collected from the backfill material present in the trenches and from native soils beneath the trenches. The samples were collected by WESTON and delivered to the 3M Environmental Laboratory for analysis of five FCs (PFOA, PFOS, PFHS, PFBA and PFBS).

The report titled "*Hydraulic Evaluation of the Barrier Well Recovery System, Former 3M Woodbury Disposal Site, Woodbury, MN*" was submitted by 3M to the MPCA on October 3, 2007.

3M and WESTON met with the MPCA to provide an update on site activities on October 9, 2007.

The third round of groundwater sampling was performed during the week of October 29, 2007. The work was performed as per the February 2007 Groundwater Monitoring Plan. A contractor

for the MPCA was on site on October 31, 2007 and collected split samples from the following sentinel wells: S01JS, S01PC, S02JS, S02PC, S03JS, S03PC, S06JS and S06PC.

3M and WESTON met with the MPCA on December 4, 2007 to review the Main Disposal Area soil sample data and to receive preliminary comments on the report titled, *Hydraulic Evaluation of the Barrier Well Recovery System*. Based on comments received, work began to prepare an addendum to the hydraulic evaluation report and a work plan for performing additional sampling in the Main Disposal Area.

Presentation materials were prepared and logistical arrangements made in anticipation of the January 10, 2008 public meeting concerning the Woodbury Disposal Site RI/FS.

### All Sites

3M has begun a process to locate appropriately permitted landfills as candidate disposal locations for excavated soils generated at any or all of the three sites.

### Information-Sharing Process (Part XIII.B)

A regular schedule of meetings (generally every 2-3 weeks) has been employed to enable 3M and MPCA personnel to discuss specific items relative to this information-sharing requirement under the Consent Order. A standard format to summarize and periodically update the various information requests has been used to guide the discussions. The most recent version of this summary is attached.

The following items were completed and submitted to the MPCA during the October-December 2007 timeframe:

- Health and environmental studies for PFCs beyond those already provided on the eight CD set of information and the C4 submittal.
- Compilation of documents addressing actions considered by 3M in managing wastes containing PFCs (Part XIII.B.2).
- Compilation of documents addressing any characteristics of PFC relative to MERLA or MN hazardous waste rules (Part XIII.B.3).
- Response to MPCA inquiry concerning information on emissions of PFCs from 3M facilities in Minnesota.

Beyond the regular meetings and the submittals noted above, the following specific information-sharing event also occurred:

- On October 18, 2007, a meeting was held with MPCA staff in which 3M presented information concerning the development of PFC analytical techniques and current issues relative to generating valid data.
- On December 20, 2007, a seminar was held with MPCA staff in which Dr. Jennifer Field from Oregon State University presented information on the characterization of PFCs at landfills, publicly owned treatment works and fire training areas. She also shared research findings in the area of fate and transport of PFCs in the environment.

#### Health and Toxicological Studies (Part XIII.C)

3M has continued to cooperate with the Minnesota Department of Health (MDH) in developing and implementing health and toxicological studies needed to develop drinking water criteria for PFCs. The process established in May-June of 2007 to share specific updates on various studies as they are underway has continued to be followed with 3M providing monthly written summaries to the MDH. For informational purposes, copies of these updates are now also being provided to MPCA management.

In addition to the written correspondence noted above, meetings and/or phone calls involving 3M and MDH personnel have also occurred to discuss the most significant developments in a timely and thorough manner.

## ACTIVITIES UNDERWAY &/OR PLANNED FOR JANUARY - MARCH 2008:

### Remedial Investigations (Part VI) and Feasibility Studies (Part VII)

Given the interrelatedness of the remedial investigation (RI) work and the feasibility studies (FS), these sections have been combined with the intent of providing a simpler, more straightforward update.

#### Cottage Grove

Work is underway relative to completion of the FS Report, due for submittal by March 13, 2008. As part of the process of developing this report, 3M will be facilitating a public meeting to review the results from the Remedial Investigation and to outline and seek public input on remedial action options under consideration in the Feasibility Study. This meeting is scheduled for January 31, 2008 at Cottage Grove Junior High School, 9775 Indian Blvd. in Cottage Grove. A one-hour, informal poster session followed by a one-hour general session to include presentations and a time for questions and answers has been planned.

#### Oakdale

The FS Report was submitted to the MPCA on January 28, 2008, as outlined by the Consent Order. 3M will continue preliminary planning activities to be in a position to implement a remedy following MPCA final selection.

#### Woodbury

A public meeting was held on January 10, 2008 at Middleton Elementary School for the purpose of informing interested individuals about results from the Remedial Investigation and seeking their input concerning alternatives under consideration for the Feasibility Study. Approximately 200 people attended and a constructive dialogue took place concerning options being evaluated and issues of interest to the public.

On January 17, 2008, 3M submitted an addendum to the *Hydraulic Evaluation of the Barrier Well Recovery System* report and a work plan for conducting additional sampling in the Main Disposal Area at the site. Following MPCA approval, additional soil samples from the Main Disposal Area will be collected and analyzed to further characterize this area. It is anticipated that this work will be completed by March 2008.

It is anticipated that analytical results for the third round of groundwater samples collected in October 2007 will be finalized by March 2008. In addition, collection of the fourth round of samples is being scheduled for the same time period.

Work will continue towards completion and submission of the RI/FS Report to the MPCA by February 17, 2008, as specified in the Consent Order. Beyond this date, 3M will continue

preliminary planning activities to be in a position to implement a remedy following MPCA final selection.

#### All Sites

3M will continue to work towards a final selection and necessary arrangements with an appropriately permitted landfill for the disposal of excavated soils generated at any or all of the three sites.

#### Information Sharing Process (Part XIII.B)

With regard to the specific items identified in Part XIII.B, 3M understands that with the October-December 2007 submissions of information (described above), all obligations under Part XIII.B have been met.

Based on discussions with MPCA staff, 3M and agency personnel plan to continue to meet on a regular basis to review new developments and information that could be helpful in understanding PFC issues in Minnesota. This may include additional meetings or seminars where subject matter experts are brought in to share knowledge on particular topics of interest.

#### Health and Toxicological Studies (Part XIII.C)

3M will continue to share health and toxicological information on perfluorochemicals with MDH as it becomes available. Monthly summary reports as previously described will continue to be provided. Relative to the 90-day feeding study for PFBA, the final report was recently completed and an electronic version of the full study report was sent to the Minnesota Department of Health on January 11, 2008.

Status of Requested Information  
Pursuant to Paragraph XIII.B of May 22, 2007 Consent Order Between MPCA and 3M

<b>Item or Information Requested</b>	<b>Date Requested</b>	<b>Status of Request</b>
<b>Health or Environmental Effects</b>		
Studies in EPA's AR-226 Docket	5/22/2007	Completed 6/22/2007 – contains studies on PFOA, PFOS and its salts, PFHS, PFDS, AFFF (fire-fighting foam), POSF and several POSF derivatives (including alcohols, amides, acetates and acrylates)
Copies of Customer Studies Identified in Bibliography Submitted Under CBI Claim	8/21/2007	Completed 09/25/2007
Studies on Other PFCs	5/22/2007	Completed 09/28/2007 for C4 PFCs; completed 11/30/2007 for remaining PFCs
Ongoing Health Effects Studies	5/22/2007	Providing MPCA with copies of the monthly reports to MDH
Ongoing Environ. Effects Studies	5/22/2007	Being addressed in status meetings
<b>Precautions</b>		
See XIII.B(2) of Consent Order	5/22/2007	Completed 10/31/2007 for C4 through C16 PFCs; completed 11/30/2007 for C1 through C3 PFCs (see note below)
<b>Characteristics</b>		
See XIII.B(3) of Consent Order	5/22/2007	Completed 10/31/2007 for C4 through C16 PFCs; completed 11/30/2007 for C1 through C3 PFCs (see note below)
<b>Other Requests</b>		
Communications Timeline – through 12/31/89	Offered in 5/2007 negotiations	Completed 6/29/2007
Communications Timeline – 1/1/90 through 5/16/00	Offered in 5/2007 negotiations	Completed 8/30/2007
MDH Request for Monthly Updates (PFC research planned, in progress, or conducted but not yet published).	6/1/2007	First monthly update provided to MDH 6/22/2007; future updates are being provided to MDH on a monthly basis with copies to MPCA
Questions on Emissions of PFCs from 3M Facilities in Minnesota	7/12/2007	Completed 11/30/2007

Note: Documents relating to precautions and characteristics (XIII.B(2) and XIII.B(3) of Consent Order) include waste manifests, waste stream profiles, material safety data sheets and product environmental data sheets. Due to the large volume of that material (approximately 30 boxes), 3M gave MPCA samples of those documents on October 31, 2007 and is holding on to the rest of those documents pending further instructions from the agency.