Olin CHEMICALS
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April 8, 1993

Phillip Masters
Hazardous Waste Facilities Branch
United States Environmental Protection Agency
Region II
26 Federal Plaza, Room 1037
New York, New York 10278

Re: Quarterly Report
Olin Corporation
Niagara Falls, NY, Plantsite
RCRA Facility Investigation

Dear Ms. Masters:

Pursuant to paragraph V.A. and Task V. of Attachment A of the Administrative Order, the Quarterly Report for the Niagara Falls RCRA Facility Investigation (RFI) is herewith submitted.

Please call (615-336-4308) if you have any questions about this report or any of the work under the RFI.

Sincerely,

OLIN CORPORATION

J. C. Brown
Manager, Environmental Technology

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Attachment

cc: P. Counterman (2)
W. G. McGlasson
K. R. McIntosh
J. P. Mitchell
G. C. Meyer
L. E. Murray
S. F. Radon
A. D. Rheingold
Permits Admin. Branch - EPA

Quarterly Report
Olin Corporation
Niagara Falls, New York
RCRA Facility Investigation

Report for:
January through March 1993

This Quarterly Report is submitted pursuant to paragraph V.A. and Task V. of Attachment A of the Administrative Order on Consent (RCRA-89-3013-0208) between the U. S. Environmental Protection Agency (EPA) and Olin Corporation. This report describes the progress, status, and plans for the RCRA Facility Investigation (RFI) being conducted under the Order at Olin Corporation's Niagara Falls, NY, plant.

RFI Status

The report of Man-made Passageways Evaluation was submitted on January 7, 1993. Olin is awaiting comments from EPA/DEC.

The data validation report for the fourth quarterly sampling was submitted March 10, 1993.

A description and estimate of the percentage complete of the individual tasks under the RFI are presented in Attachment A. Overall, the RFI is approximately 80% complete.

Findings

The findings to date are:

- water bearing zones in the bedrock correspond to the zones established for the Du Pont plant site study (A, B, C, and CD zones);
- the Olin production wells (OPW), pumping at 600 gpm, create a zone of influence that extends approximately halfway (east-west) across Olin's Plant 2 in the B zone, and approximately to Gill Creek in the C and CD zones;
- well cluster 8 on Olin's Plant 1 appears to exhibit residual drawdown from downward movement of water into the C and CD zones;
- there is little significant groundwater in the overburden and contaminant migration is preferentially downward into bedrock;
- overburden is thin (5 to 10 feet thick typically) at most points throughout the site;
- a bedrock "high" is present in the area of the former "mercury pond" SWMU;
- gradients are relatively flat in the bedrock fracture zones when the production wells are not pumping (wells pump 600 gpm continuously);
- dense non-aqueous phase liquid (NAPL) was found in well OBA-2C and consisted primarily of trichloroethene and tetrachloroethene, with other components present at lower concentrations;
- elemental mercury was observed in a split-spoon soil sample taken at the 6 to 8 foot depth near SWMU LA-3 (note that this is a correction to the information we gave you on November 14: we said near 6 feet deep then, but after further review, Woodward-Clyde determined that it was actually about 7 feet deep);

Findings (continued):

- A zone (overburden) groundwater that moves laterally will discharge to Gill Creek to the east or sewer routings in other directions, although most migration is expected to be downward into rock;
- most overburden consists of fill; and
- B and C zone heads are lower than the elevation of the Gill Creek water surface.

Recommendations and conclusions from the Interim Report included:

- additional wells are necessary to fill data gaps in the hydraulic profile of the site;
- manmade passageways do not represent a significant potential for enhancing offsite contaminant migration; and
- site soils are contaminated as the result of almost 100 years of plant operations and additional soil sampling will not refine the present knowledge about specific SWMUs.

Changes to RFI

The Interim Report recommended additional monitoring wells at several locations. EPA commented on the Interim Report on November 4, 1992, recommending several locations in addition to those recommended in the Interim Report. On November 24, Olin responded to EPA's comments, agreeing in concept to EPA's additional locations, but proposing alternatives to collect data comparable to data that would be collected by EPA's recommendations. These alternatives included use of data from DuPont monitoring wells bordering Olin property. EPA requested additional information regarding the DuPont wells and data and Olin responded to this request on January 8 and 14. EPA is currently reviewing Olin's proposal.

Olin installed two additional wells during November 1992 using the design approved in the Work Plan. These wells, OBA-9A and OBA-10A, near Gill Creek at the southeastern corner of Olin's Plant 2, were sampled on November 16. Data were reported with the fourth sampling round data submitted March 10, 1993.

Problems During the Reporting Period

There were no problems during the reporting period.

Release Incidents

On January 8, 1993, a fire occurred in an HTH brand calcium hypochlorite warehouse. The fire affected an adjacent warehouse that was originally used in chlorine production using the mercury cell process. Subsequent rainfall runoff from the fire area onto paved areas caused mercury concentrations in a stormwater sewer to exceed the SPDES permit limit. Runoff is currently being collected from this sewer and treated offsite until the building that was destroyed by fire is demolished and the area decontaminated. Olin does not believe this incident has affected soil or groundwater in the area.

On February 21, 1993, a leak in a caustic soda (50% sodium hydroxide solution) storage tank was discovered. Approximately 100 to 200 gallons overflowed to gravel and paved areas near

the tank. The overflow was collected and the area neutralized with sodium bisulfate. The tank was emptied and Olin is assessing the potential for any impact to groundwater or soils.

Actions to Rectify Problems

Other than the release actions described above, there were no problems during the reporting period requiring actions to correct.

Changes in Personnel

Jeff Trad replaced Jean DuBois as the NYSDEC RCRA representative and Bill Wertz of NYSDEC-Albany is reviewing hydrogeological aspects of the project.

Projected Work for Next Reporting Period

The following work is planned for the next three-month reporting period:

- changes agreed to with EPA resulting from their review of the Interim Report will be planned and implementation initiated;

Attachment A

Quarterly Report
Olin Corporation
Niagara Falls, New York
RCRA Facility Investigation

Report for:
January through March 1993

Task	Date	% Comp.	Comments
Hydraulic testing	3/25/91	100	Pump test of OPW and continuous head measurements of selected wells
Well sampling (1st rnd.)	10/7/91	100	NAPL noted in OBA-2C
Analysis of 1st rnd. GW		100	
Soil sampling	10/18/91	100	Elemental Hg noted in LA-3 area
Analysis of soil samples		100	
Hydraulic head monitoring	10/7/91	100	
Identification of passageways	12/21/92	100	
Preparation of Interim Report	2/4/92	100	
Well sampling (2nd rnd.)	3/2/92	100	
Analysis of 2nd rnd. GW	3/13/92	100	
Well sampling (3rd rnd.)	6/26/92	100	
Analysis of 3rd rnd. GW	7/28/92	100	
Evaluation of passageways	11/9/92	100	
Well sampling (4th rnd.)	9/18/92	100	
Analysis of 4th rnd. GW	10/23/92	100	
Additional well installation	11/4/92	10	Wells 9 & 10 installed near Gill Creek.
Additional well sampling	11/16/92	10	Gill Creek wells sampled 11/16/92. One round assumed for these wells.
Evaluation of all data		40	
Submit draft RFI report		0	Target to be established.