Olin CHEMICALS
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Octobert 5, 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 Mr. 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 (615/336-4587) if you have any questions about this report or any of the work under the RFI.

Sincerely,

OLIN CORPORATION

Michael J. Bellotti

Michael J. Bellotti
Senior Associate Hydrogeologist

Attachment
/mjb/nf_qr5
cc: D. E. Bennewitz
Joseph Clore (USEPA Region II)
P. Counterman (DEC Albany)
W. G. McGlasson
K. R. McIntosh
G. C. Meyer
J. P. Mitchell
L. E. Murray
S. F. Radon (DEC Buffalo)
A. D. Rheingold
Jeff Trad (DEC Albany)
Bill Wertz (DEC Albany)

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

Report for:
July through September 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.

A scope of work was identified by USEPA / NYSDEC / Olin to complete data requirements for RFI.

Findings
The findings to date are:

- water bearing zones in the bedrock correspond to the zones established for the DuPont 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);
- 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.

Olin and USEPA / NYSDEC agreed to a series of data development tasks to complete the RFI. This scope consists of area-wide piezometric measurements coordinated with adjacent sites; sampling of selected DuPont wells for VOC's, pesticides and mercury and supplementing existing soil boring/analysis data at Olin's Plant 1 and Plant 2. USEPA has agreed to Olin's request to use existing DuPont groundwater quality data, per data validation, and to sample selected DuPont wells. Olin will install two new clusters of three wells. Olin will initiate development of a Corrective Measures Study, per NYSDEC guidelines.

Problems During the Reporting Period
There were no problems during this reporting period.

Release Incidents
There was one State reportable quantity release incident during this reporting period. On September 20 approximately 120 gallons of 50% caustic were spilled at the rail car unloading area at Building 49. This quantity (750 lbs) did not exceed the USEPA reportable quantity of 1000 lbs. Appropriate reporting was completed to State and local agencies. Due to the short duration and rapid response to the spill, as noted below, it is unlikely that there was any additional caustic loading to groundwater, and thus no impact on any ongoing element of the RFI.

Actions to Rectify Problems
Groundwater pumping continues at the caustic tank area, with objective of containing any caustic spillage from the Feb. 21 spill incident. The groundwater study field work, to identify the area affected by the Feb. 21 caustic spill, was implemented. A report is in preparation. The September 20 spill was addressed within minutes. The caustic was water-washed to railroad spill pans and pumped to an off-spec tank. Affected soil was removed to a ten inch depth, i.e. to a depth of dryness, and backfilled with clean fill.

Changes in Personnel
none

Projected Work for Next Reporting Period
The following work is planned for the next three-month reporting period:

Olin is preparing and will submit a report to document field implementation of the caustic spill work plan to investigate the effects of the February 21 caustic spillage. USEPA has approved the work plan.

Olin will implement the area-wide piezometric measurements and the first of two groundwater samplings of approved selected DuPont wells for mercury, VOC's and pesticides.

Olin will evaluate existing soil boring data and develop a soil sampling plan to supplement these data for the Plant 1 and Plant 2 areas.

Olin will initiate a Corrective Measures Study, per USEPA / NYSDEC guidelines, to begin conceptual remediation planning.

/mjb/nf_qr5

Attachment A

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

Report for:
July through September 1993

Task	Date	% Comp.	Comments
Hydraulic testing	03/25/91	100	Pump test of OPW and continuous head measurements of selected wells
Well sampling (1st rnd.)	10/07/91	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	10/07/91	100	
Identification of passageways	12/21/92	100	
Preparation of Interim Report	02/04/92	100	
Well sampling (2nd rnd.)	03/02/92	100	
Analysis of 2nd rnd. GW	03/13/92	100	
Well sampling (3rd rnd.)	06/26/92	100	
Analysis of 3rd rnd. GW	07/28/92	100	
Evaluation of passageways	11/09/92	100	
Well sampling (4th rnd.)	09/18/92	100	
Analysis of 4th rnd. GW	10/23/92	100	
Additional well installation	11/04/92	10	Wells 9 & 10 installed near Gill Creek.
Additional well sampling	11/16/92	10	Gill Creek wells sampled wells One round assumed for these wells
Evaluation of all data		40	
Submit draft RFI report		0	Target to be established.