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CHEMICAL LAND HOLDINGS, INC.

February 16, 2001

U.S. Environmental Protection Agency, Region II
Emergency and Remedial Response Division
290 Broadway, 19th Floor, Room W-20
New York, NY 10007-1866

Attention: Ms. Janet Conetta
Strategic Integration Manager

Subject: Meeting Notes – CSO Post-Trial Run Meeting
Passaic River Study Area
Administrative Order on Consent Index No. II-CERCLA-0117

Dear Ms. Conetta:

Please find enclosed notes of the meeting between representatives of the United States Environmental Protection Agency (EPA), New Jersey Department of Environmental Protection, Passaic Valley Sewage Commissioners (PVSC), and PVSC's consultants, Great Lakes Environmental Center, Malcolm Pirnie, and Killam Associates, held on February 6, 2001 at EPA's office in Edison, NJ.

Sincerely,

Clifford E. Firstenberg
Project Manager
On behalf of Occidental Chemical Corporation
(as successor to Diamond Shamrock Chemicals Company)

enclosure

(2 copies sent)

835030001

2c: Section Chief
NJDEP-Bureau of Federal Case Management
401 East State Street - CN 028
Trenton, NJ 08625-0028
Attn: Jonathan D. Berg

1c: Chief, New Jersey Superfund Branch
Office of Regional Counsel
U.S. Environmental Protection Agency
290 Broadway, 19th Floor, Room W-20
New York, NY 10007-1866
Attention: Diamond Alkali Site Attorney - Passaic River Study Area

MEETING NOTES
Passaic River RI/FS – CSO Post-Trial Run Meeting
EPA Region 2
Edison, NJ
February 6, 2001
10:00 AM – 1:00 PM

Attendees

Chemical Land Holdings	U.S. EPA/NJDEP/PVSC
Firstenberg – Project Manager (CLH)	Jaffess – Co-Project Manager (EPA)
Hebert (CLH/BBL)	Winfield – Co-Project Manager (EPA)
McNally (CLH/BBL)	Brown (EPA)
McNutt (CLH)	DeGraeve (PVSC)
Romagnoli (CLH/BBL)	Fan (EPA)
Waldschmidt (CLH/EDS)	Field (EPA)
Wolfskill (CLH/Consultant)	Hayton (NJDEP)
	Kerbel (PVSC)
	Lai (EPA)
	McKenna (PVSC)
	Morrell (EPA)
	Rolak (PVSC)

Preliminaries

Everyone introduced themselves and their roles.

EPA explained the purpose of the meeting: They are trying to understand the differences/similarities between the Passaic River Remedial Investigation/Feasibility Study (RI/FS) Combined Sewer Overflow (CSO) investigation and the work underway for the Harbor Estuary Program (HEP) Contaminant Assessment Reduction Program (CARP), which is being lead, for the State of New Jersey by Great Lakes Environmental Center (GLEC) under contract to Passaic Valley Sewage Commissioners (PVSC). If possible, EPA would like to have the programs collect data that are useable by both.

Meeting Notes

CLH began with an overview of the Trial Run sampling program, summarized as follows:

- CLH presented the goals of the Trial Run sampling program, and explained how the results were used to modify the Work Plan for the Full Scale sampling program. In addition, PVSC's written comments were considered and, as appropriate, incorporated into the latest version of the CSO Work Plan.
- Sediment Traps
    - Six installed instead of the planned two, to understand differential capture due to location within the chamber.

  - Sediments were coarser than the Bulk Sample, which was not unexpected.
  - CLH could not determine if traps were being scoured.
  - Results are inconclusive if chamber is tidally influenced.
- Bulk Sample
  - 400 gallons of water collected.
  - Both aqueous (filtered/unfiltered) and solids samples were collected and analyzed.
  - Moisture content was a problem due to inability to scrape sediment from filters, and need to digest filter along with sediment sample, thereby including significant amounts of water into the analytical process.
  - Sediments included finer fractions than those collected using traps.

The Bulk Sampling approach was determined to be more representative of the suspended solids being discharged due to the demonstrated ability to capture a broader range of grain sizes, particularly in the smaller size fractions. However, sediment traps have some potential application if Bulk Sampling is infeasible and tidal influence is not a problem.

The Full-Scale program was designed based on the results of the Trial Run program and PVSC comments, and includes the use of a field centrifuge instead of filters to mitigate the impact of the filtration process.

R. Field explained that he has conducted a lot of aqueous sampling and has never had problems with filters. He did not have specific information, but offered to provide papers describing procedures and performance.

M. DeGraeve explained the HEP/CARP program methodology:

- Collect 2-2½ liters of effluent for each analytical group.
- Filter through 0.45μm filter.
- Extract filter (triple extraction) – the filter is not weighed.
- Concentrate.
- Pass over sodium sulfate to dry (standard procedure for organics).
- Use NOAA methods for extraction/analysis (high resolution mass spectrometry-liquid/liquid extraction). Dried at low heat. "Performance-based" QA program.

This procedure achieved 1-2 nanograms/liter detection limits. The analytical suite included 120 PCB congeners, 40 pesticides, PCDD/Fs, PAHs, and a few metals.

CARP evaluated the result of whole water/filtered water differencing against modeled results using whole water chemistry, TSS, and partitioning theory, and determined that results were comparable. Therefore, CARP will be using whole water chemistry along

with partitioning theory and TSS to determine loading. This issue raised considerable discussion over the reliability of partitioning theory and its applicability to a CERCLA project. The CARP's "local" chemists/modelers believe they know the chemistry of partitioning well enough to use this approach.

CARP will use the Tolman/Farley model, which is based on WASP5 and WASPTOX, as well as other EPA models to calculate loading. There will soon be a major modeling effort ($3.5MM) to develop a management model based on this work. This will last 3-5 years.

To determine the mass of chemistry, CARP will use results of whole water chemistry and TSS, and model/calculate the mass of chemicals that are related to the solids fraction.

There was a brief discussion of flow-weighted sampling versus time-dependent sampling, which is the default approach used by the CSO program due to the large volume of water required. It was subsequently recognized that the CARP is not collecting flow-weighted samples either. EPA is collecting these samples and is collecting a 2-hour composite of 15-minute grab samples.

There was a significant amount of discussion of laboratories and their capabilities. CLH is using laboratories that are experienced in SW846 methods, have demonstrated their performance under independent audit, and are working according to the stringent QAPP requirements and reporting protocols of CERCLA. CARP is using research-oriented laboratories, such as Battelle, STL (formerly, Quanterra Lab), and others, experienced with NOAA methods and who work according to performance based quality objectives.

The validation procedure used by CARP is multi-staged:

1. Internal – first there is an internal review of the data by the laboratory.
2. GLEC Review – then the Great Lakes Environmental Center reviews the data.
3. State of NJ – then the state of New Jersey performs a validation (the level and scope of validation was not revealed).
4. CARP validation – a data validation contract was just awarded to Martha Keene to perform validation of the dataset.

Mick DeGraeve agreed to provide the validation protocols. EPA will arrange for a comparison of the validation protocols used by EPA (and the CSO sampling program), versus those of the NJDEP and CARP.

PVSC's consultant, Malcolm Pirnie, is using the SWM model to estimate loading to the receiving water body.

CLH asked about the TOPS sampler that is showcased on the NYSDEC WEB site for the CARP program. DeGraeve and PVSC indicated that it does not work. It clogs almost immediately, so it seems to only be useful for sampling water with very minimal suspended solids loads.

R. Field, EPA suggested that CLH consider plastic filters instead of the paper filters that caused the significant impact to moisture content. He also suggested settling column tests to determine the fraction that settles upon contacting Passaic river water.

Malcolm Pirnie questioned CLH about the configuration of the pumping system; CLH provided additional detail to the question that was posed in PVSC's comment document, and to which CLH responded in its Comment-Response document. CLH reported that the intake of the sampling pump was approximately 2 inches off the bottom of the chamber; the pump was rated at 3.8 gallons/minute; and pumping was not initiated until after a strong discharge was observed/measured, to ensure that there would be no ambient Passaic river water in the chamber due to tidal influence.

Malcolm Pirnie noted that there was a definition for a "dry" weather event, but not for a "wet" event, except as it differed from a "dry" event. It was suggested that criteria be developed for the latter.

Malcolm Pirnie also suggested using the 60 samples proposed in the CLH CSO Sampling Program in different combination than the 1 "wet"/1 "dry" sample per CSO to try to place more sampling effort on outfalls that had more industrial activity. This concept was further refined to attempt to collect one sample from each of the 30 outfalls, and then collect additional samples at those outfalls having the highest propensity to discharge and with consideration of the mix between industrial, commercial, and residential contributors to a district. CLH indicated that it would need PVSC's cooperation to refine the sampling effort based on drainage basin data and SWM modeling efforts. PVSC requested that CLH submit its request via e-mail.

CLH noted to EPA that, while the suggestions for change (e.g., CARP analytical methods, modified CSO sample priorities) represent potential improvements to the CSO program, the evaluation of these changes and the resultant implementation will impact the project schedule. EPA and CLH recognized that the first step in this evaluation, consideration of the CARP analytical methods, will impact the start of the CSO field program.

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Action Items

- EPA will:
  - Send all CARP information (Work Plan, QAPP, validation info, etc.) to CLH.
  - Provide papers describing procedures and performance of filtration methods.
  - Evaluate CARP data validation procedures against those required by CERCLA.
  - Check with EPA-legal about using non-CERCLA methods.
  - Check into concerns about holding time for the bulk sampling approach in the CSO Work Plan.
  - Provide feedback on centrifugation versus filtration.
  - Work with City of Newark for results of the City's CSO SWM modeling efforts. EPA will provide to CLH contact information for City of Newark (Guy Apacello).

- CLH will:
  - Prepare Meeting Notes and submit to EPA.
  - Send request to PVSC for results of SWM modeling.
  - Send request to City of Newark (Guy Apacello) for City of Newark SWM modeling (EPA will provide contact information).
  - Send request to PVSC for technical meeting once details of sampling program are resolved.

- Great Lakes environmental Center will:
  - Provide the validation protocols for the CARP program. EPA will arrange for a comparison of the validation protocols used by EPA (and the CSO sampling program), NJDEP, and CARP.

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