JUN 29 1994

Richard G. Leland, Esq.
Rosenman and Colin
575 Madison Avenue
New York, New York 10022-2585

Re: Draft Remedial Investigation Report
Anchor Chemical Superfund Site

Dear Mr. Leland:

At our June 7 meeting, you requested that we reconsider certain comments which we made concerning the above-referenced report. Specifically, we discussed the groundwater samples from wells 2, 3, and 5S and soil borings samples from under the floor of the building located at the former Anchor Chemical facility. We explained that the purpose of our request for additional sampling data was to assess whether contaminants remain present at the Site. EPA has considered your request, and it has consulted with the New York State Department of Environmental Conservation on this matter, and yet we have concluded that the additional soil and groundwater data are necessary to complete the site remedial investigation.

NYSDEC strongly agrees that the sampling is necessary to determine whether a feasibility study is needed, and it will, as we indicated at the meeting, require these results before it will concur on a remedy or seek to delete the Site from the National Priority List. Consistent with your request, however, the soil and groundwater samples need only be analyzed for volatile and semi-volatile organic compounds, excluding analysis for inorganics, PCBs, or pesticide compounds.

During our meeting we also briefly discussed oversight costs incurred by EPA at the Site and the fact that the amount exceeded the average as a consequence of the multiple submittals of required documents over the four years of work at the Site. Since our meeting, you contacted me to request an estimate of these oversight costs for your discussions with the prior operator at the Site because no such oversight bill had been transmitted to date. As I explained, while we cannot provide a actual accounting of costs at this time, the following is a fairly detailed estimate for the purposes of your discussions:

Payroll	$ 138,450.00
Contractor Costs	$ 254,157.56
Indirect Costs	$ 46,384.92
Total	$ 438,992.48

If you have any questions on this matter, you may contact me at (212) 264-4472.

Sincerely,

James Doyle
Assistant Regional Counsel
Office of Regional Counsel

cc: Dean Anson
James O'Brien, Esq.

This letter incorrectly indicates payroll & indirect costs. They should be payroll - 46,384.93; indirect - 138,450.00

Rosenman & Colin
575 Madison Avenue, New York, NY 10022-2585

Telephone (212) 940-8800
Cable Rocokay New York
Facsimile (212) 940-8776
(212) 935-0679
Telex 427571 Roscol
971520 RCFLC NYK

Washington Office
1300 19th Street, N.W.
Washington, DC 20036
Telephone: (202) 463-7177

FACSIMILE COVER PAGE

DATE: July 11, 1994

NUMBER OF PAGES TO FOLLOW: 2

TO: James Doyle, Esq.

FROM: Richard G. Leland

COMMENTS:

SENDING TO FACSIMILE #: (212) 264-4359

CONFIRMING TELEPHONE #: (212) 264-2645

CITY: New York REFERENCE #: 75903/66177

SENDING ATTORNEY'S ROOM NUMBER: 1512

IF ANY PROBLEMS, TELEPHONE OPERATOR AT: (212) 940-8755

TRANSMISSION: ( ) ELECTRONICALLY CONFIRMED
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( ) NOT VERBALLY CONFIRMED

REASON: _____

ROSENMAN & COLIN

575 MADISON AVENUE, NEW YORK, NY 10022-2585

TELEPHONE (212) 940-8800
CABLE ROSCOLAW NEWYORK
TELECOPIER (212) 940-8776
(212) 935-0870
TELEX 427521 ROSCOL(ITT)
371520 RCPLC NYK(W U)

SAMUEL I. ROSENMAN (1896-1973)
RALPH F. COLIN (1900-1968)

WASHINGTON OFFICE
1300 19TH STREET, N. W.
WASHINGTON, D. C. 20036
TELEPHONE (202) 463-7177

RICHARD G. LELAND
(212) 940-8700

July 11, 1994

Via Telecopier Only

James Doyle, Esq.
Assistant Regional Counsel
Office of Regional Counsel
United States Environmental Protection Agency
Region II
New York, New York 10278-0012

Re: Draft Remedial Investigation Report
Anchor Chemical Superfund Site

Dear Mr. Doyle:

This is in response to your letter dated June 29, 1994, which was received while I was out of town. Your letter address two matters: (a) EPA's request for an additional monitoring well and sampling and the Site; and (b) oversight costs incurred to date. On behalf of K.B. Co, I respond as follows:

(a) Additional Monitoring Well. I will not use this letter as a means of rearguing this point. My client and I are disappointed in the Agency's decision and believe that it is wasteful of resources and scientifically unnecessary to install any additional wells at this Site. Direct, indirect, payroll and oversight costs far outweigh the need for this additional task.

I suggest, however, that the Agency direct Chessco and Anchor/Lith Kemco, who are respondents to a unilateral order directing them to cooperate in the investigation of the Site, to pay for this additional work. As I have advised you repeatedly, those respondents have not paid one cent for any investigative costs. Their only offers to cooperate in payment have been as part of settlement negotiations in a litigation in which my client has been awarded summary judgment declaring that those respondents are liable for all "costs of response" as defined by CERCLA. Those offers are unacceptable for reasons not germane to the EPA proceedings. They are not a substitute for compliance with EPA's order.

(b) Oversight Costs. Needless to say, my client and I are

shocked by the magnitude of these costs. The $438,922.48 figure in your letter exceeds the direct costs of the remedial investigation. As the Agency is entitled only to response costs which are "reasonable and necessary", I would appreciate receiving whatever back up exists; particularly back up which explains the contractors' fees and the Agency's payroll expenses so that I may advise my client whether these expenses will be an issue or not.

I look forward to your prompt response.

Very truly yours,

Richard G. Leland

RGL/
cc: Mr. Arthur D. Sanders
James F. O'Brien, Esq.

EPA.LTR

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FILE COPY

July 18, 1994

Richard G. Leland, Esq.
Rosenman and Colin
575 Madison Avenue
New York, New York 10022-2585

Re: Anchor Chemical Site, Hicksville, New York

Dear Mr. Leland:

I am writing in response to your July 11 letter concerning the above-referenced Site. In your letter you address a number of issues under two broad categories.

You have classified the first category as "Additional Monitoring Well" and explain your technical disagreement with EPA's decision to direct the installation of additional wells. EPA is not directing that your client install any additional wells. We have discussed additional sampling events, and as reflected in my June 29, 1994 letter, we have directed your client to obtain and analyze ground water samples from existing wells (numbers 2, 3, and 5S) and analyze soil borings to be obtained from under the floor of the facility building at the Site.

Regarding your apparent refusal to perform the directed work and your suggestion that we contact Chessco Industries and Anchor/Litho Kemco, we have been and will continue to be in contact with Chessco and Anchor/Lith Kemco concerning the performance of work at the Site. You are correct that they are jointly required to complete the remedial investigation at the Site, as is your client. If they also refuse to perform the directed work, EPA will consider its enforcement options with regard to the noncompliance of all parties under administrative order at the Site. At the same time, should other order respondent(s) elect to perform the required work, we anticipate that your client will cooperate with their efforts, and we will evaluate your client's noncompliance based on its conduct and any steps it has taken or takes at the Site.

The last issue you raise in this category is related to this point, and it is one which we have discussed on numerous occasions. Concerning the other order respondents compliance, it is not accurate to characterize the settlement efforts between your client and those parties as not "germane" to our discussion of their compliance with the order issued to them. To the

7/18/94

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contrary, such efforts are often significant indicia of compliance, and it can represent the criteria by which we evaluate their compliance status. In order to determine whether any party in this circumstance[1] is acting unreasonably, the nature of the relations among the parties must be evaluated.

Concerning your second category entitled, "Oversight Costs", we intend to provide you with an accounting of the costs with a narrative summary with our bill. Until such a billing occurs, you are welcome to review that documentation which we presently have available which is releasable under law. We appreciate that the amount is large, but as we have urged over the years with the numerous resubmittals of various documents, prompt modifications consistent with our comments accelerates the project and results in the expenditure of fewer resources for Agency review and oversight. While we would certainly characterize all of our expenditures as "reasonable and necessary", your attempt to apply this standard to evaluate EPA's costs is inappropriate. Such a standard, while it may be relevant in private CERCLA party cost recovery, is not the standard set forth in the reimbursement provision of the Consent Order (see pages 14 and 15), nor in CERCLA or the NCP.

I should also point out that with regard to your question on our payroll expenses, inadvertently the amounts set forth in the June 29 letter attributable to "Payroll" and "Indirect Costs" were inverted, and consequently the Payroll cost estimate should be $46,384.92 and the Indirect Costs estimate should be $138,450.00. The transcription error obviously does not affect the total.

For your information, in the event that your client elects to comply, or any other party complies and chooses to perform the work directed, EPA will need approximately two weeks notice of the initiation of field activities.

If you have any question, you may contact me at (212) 264-4472.

Sincerely,

James Doyle
Assistant Regional Counsel
Office of Regional Counsel

cc: Dean Anson
James O'Brien, Esq.
bcc: T. Taccone - ERRD

[1] An example of such a circumstance is where various parties are ordered to "participate and cooperate" with other parties, and for whatever reason one or more parties are performing the required work without the participation by all others.

ANSON
ENVIRONMENTAL LTD.

33 Gerard Street • Suite 100
Huntington, New York 11743
516•351•3555
Fax 516•351•3615

August 3, 1994

Thomas Taccone
New York/Caribbean Compliance Branch
U.S. Environmental Protection Agency
26 Federal Plaza, Room 747
New York, New York 10278

Re: Remedial Investigation Report Revisions
Anchor Chemical Superfund Site
Administrative Order No. II CERCLA-90208

Dear Mr. Taccone,

In accordance with the above referenced Administrative Order, Anson Environmental Ltd. is submitting the following responses to the comments made to the Remedial Investigation report submitted for the above referenced site.

The responses, upon your concurrence, will be incorporated into the RI report and the report itself will be re-submitted to your office. The responses have been prepared individually with the comments. We have also enclosed copies of pages from the reports by Environmental Standards Inc. which supports our conclusions with regard to the laboratory and field contaminants. In addition, we have enclosed a copy of an article from SOILS magazine, January-February 1994, which discusses the presence of phthlates as plasticizers. The article cites EPA Region VII conclusions about the compounds as "...ubquitous laboratory contaminants..".

We trust that this information is satisfactory for your purposes. If there are any questions or you require additional information, please do not hesitate to call us.

Very truly yours,

Dean Anson II
Co-Facility Coordinator

cc: F. Werfel, Spiegel Associates
R. Leland, Esq., Rosenman and Colin

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Anchor RI Response
July, 1994

Comments from the EPA are in **bold typeface.** Responses appear below the comment.

Section 3.2 Contaminant Source Investigation

Comment 11. Figure 3-3 was not revised to show the exact locations of the six soil borings. The figure must be revised to show actual, not probable locations. Also, another figure is needed to show the locations of the cesspool and drywell samples.

RESPONSE
A new Figure 3-4 is attached identifying the exact locations of the six indoor soil borings with measurements from the interior walls.

A new figure, designated Figure 3-5, (attached) identifies the locations of the cesspool samples, as measured from the outside of the building.

Finally, diagrams were requested to show the specific structures and dimensions of the cesspool and drywells sampled. On July 13, 1993, Dean Anson transmitted a diagram of a "Typical Leaching Pool." If, in fact, this diagram is a true representation (including dimensions) of both the cesspool and drywells on-site, it should be incorporated and referenced in the RI report.

RESPONSE

Figure 3-3A will identify the location of cesspools in the front of the building (south side). Figure 3-3B is a diagram of the dimensons of typical leaching pools found on-site. The diagram of the pools should be considered as the appropriate structure for the leaching pools on site. Measurement of the depth of each drywell were taken in September, 1993 and forwarded to the USEPA. The following depths, recorded on the September 20, 1993, represent the depth to the bottom of the drywell (top of the sediment).

Drywell designation	Depth to bottom
DW-1	15 feet 10.25 inches
DW-2	15 feet 0.25 inches
DW-3	15 feet 9.375 inches
DW-4	10 feet .025 inches
DW-5	16 feet 3.875 inches
DW-6	15 feet 1.00 inches
DW-7	18 feet 3.75 inches
DW-8	15 feet 7 inches
DW-9	15 feet 5.5 inches

The diameter of the cesspools on site is approximately 10 feet, 0 inches as indicated on the drawings.

These will be incorporated into the July 1994 submission along with the typical leaching pool diagram from K.B. Co. and referenced in the text on page 3-3.

The drywell samples were taken in the drywells as numbered in the Project Operations Plan (Figure 4 from the POP is attached).

Section 3.3 Geological Investigation

Comment 12. Pages 3-9 and 3-10 of the revised report discuss the methods used for well development. However, table 3-3 on page 3-22 does not make sense. On November 3, 1993, Anson Environmental transmitted a revised, corrected table. The revised table provides the needed information except for the development dates for wells 1S, 2 and 3. Instead of a providing a specific date the term "prior to sampling" is used. Specific dates are needed for these wells also.

RESPONSE

Monitoring wells #1S, 2, and 3 were installed by Lockwood, Kessler and Bartlett in 1982. The specific development dates are identified as September, 1982. In addition, prior to collecting groundwater samples, each of the wells had three to five well volumes of water removed from it.

Section 4.0 General

New Comment. The report does not adequately compare Site data with all applicable or relevant and appropriate requirements ("ARARs"). Groundwater data must be compared to both federal and New York state maximum contaminant levels (MCLs). Soil data cannot be compared to MCLs. MCLs are for contaminants in water only. Therefore, Table 4-7 must be revised or eliminated. In addition, another table is needed which compares the New York State Department of Environmental Conservation's (NYSDEC) soil clean up objectives (copy enclosed) with the Site soil and sediment data.

RESPONSE

New tables have been produced as requested with the MCLs for groundwater and the NYSDEC soil cleanup standards for the soil samples.

Comment 15. There is still no mention of the high levels of lead and chromium found in the groundwater samples from monitoring wells 1S, 1D, 2, 3, 4 and 5S. Please expand Section 4 to discuss the elevated levels.

RESPONSE

Written comments by Environmental Standards Inc. the data validator, for the April 1992 groundwater samples (attached) state that "Due to the presence of lead ... in the field blanks, the results for these analytes in ... MW-1S, MW-4, MW-6D and MW-6S ... are unreliable ...".

"The positive results for lead in all samples have been flagged ... and should be considered estimated."

"The following positive results and detection limits for ... chromium have been qualified as estimated ..."

The final RI report will contain the following language:

Elevated levels of chromium and lead were detected in the groundwater samples collected. The concentrations are summarized below:

	1992 Chromium (in ppm)		1992 Lead (in ppm)	
Monitoring Well	April	November	April	November
Shallow Wells				
MW-1S	11*	353	ND	87.0*
MW-2	317*	1440	74.7*	240*
MW-3	227*	1150	30.2*	71.5*
MW-4	14*	15.5*	ND	10.2*
MW-5S	137*	131	44.4*	33.6*
MW-6S background	**13***	**54.4**	**ND**	**29.4***
MW-7S	33*	19.6*	27.9*	27.0*
Deep Wells				
MW-1D	132*	19.7*	29.4	17.2*
MW-5D	48*	101	31.4*	40.4*
MW-6D background	**33***	**45.6**	**ND**	**25.2***
MW-7D	18*	47.2	27.9*	25.8*

*estimated value per data validation
ND = not detected

Because of the data validator's comments regarding the metals in groundwater in the April 1992 sampling, the use of the data for MW-6S and MW-6D is not appropriate. All the data from April should be disregarded and the data from November 1992 used to describe the site.

Elevated levels of lead and chromium in the groundwater in monitoring wells 1S,1D, 2, 3, 4, and 5S were identified in the November 1992 sampling. These levels may be due to several factors including the presence of these metals in the drywells in close proximity to the following wells:

Monitoring Well	Drywell	Concentration of Chromium (Cr) and Lead (Pb) in Drywell	
MW-1S and MW-1D	DW-4	Cr = 31.7 ppm	Pb = 154 ppm
MW-2	DW-8	Cr = 198 ppm	Pb = 1620 ppm
MW-3 and MW-4	DW-7	Cr = 54.2 ppm	Pb = 157 ppm
MW-5S	Drain	Cr = 71.0 ppm	Pb = 216 ppm

The concentrations in each of these drywells or drain exceed site background levels of 3.4 parts per million (ppm) for chromium and 2.1 ppm for lead. Site background was derived from soil sampling at MW-6D (see Table 4-3).

Section 4.1 Drywell, Drain and Cesspool Analysis

New Comment. Page 4-2, top of page - The first full sentence states that "no volatile organic compounds were detected in drywells 1, 3, and 5 ..." However, toluene and methylene chloride were both detected at 1100 ppb in the sediment sample from drywell 3. Please revise the statement accordingly.

RESPONSE

The first full sentence will now read "... drain samples were collected from the sediment in the bottom of the structures. Validated laboratory data for samples collected from Drywells 1, 5 and the drain did not have any volatile compounds above the method detection limits.

Methylene chloride (1100 µg/Kg) and toluene (1100 µg/Kg) have been labeled with qualifiers by the data validator (Environmental Standards, Inc.) which stated: 'due to the presence of methylene chloride, toluene and bis(2-ethylhexyl)phthalate in field blanks, trip blanks and/or laboratory method blanks, these compounds in the following samples should be considered "not-detected" and have been flagged "U" on the data tables ... ' " These comments apply to methylene chloride in all positive soil sample results for drywell samples.

For toluene, the comment only applies to drywell #3.

Comment 18. The report again, as in the last draft, compares the sediment sample results with data from soils in Hicksville, New York. As was stated in the previous comment letter, the background sample data from wells 6S and 6D should be used for this type of comparison. Please revise the report to address EPA's earlier comment.

RESPONSE

Discussion of Hicksville soil numbers will be eliminated and site background data (MW-6S and MW-6D) will be used for comparison purposes.

Comment 19. Please discuss and incorporate into the RI report the results of the cesspool samples which were taken in September 1993.

RESPONSE

The results of the second round of cesspool sampling which was conducted after the submission of the revised RI will be incorporated as follows: The results were forwarded to the USEPA on November 10, 1993 (copy attached).

The results of the sampling of the cesspools at the depths which approximate the clean material below the bottom of the cesspools do not indicate the presence of volatile organic compounds above the NYSDEC MCL standards.

Section 4.2 Tank Investigation and Soil Borings Inside the Building

New Comment. Page 4-8 - As a result of the detection of 2-butoxyethanol in the soil samples from indoor borings 1 and 2, additional soil samples are needed downgradient from tank 14, which stored the chemical. Two soil borings should be advanced 4 to 5 feet from the southeastern and southwestern corners of tank 14 and should be advanced and sampled using the same procedures which were used for indoor borings 1 through 6. Please submit a proposed date for the borings to Tom Taccone within 14 days of receipt of these comments.

RESPONSE

This compound was detected as a tentatively identified compound with estimated concentrations. The compound was not detected in the groundwater samples in either the upgradient or downgradient wells.

The compound was tentatively identified in the volatile screening for indoor boring #1 at 10-12 feet at a level of 30 µg/Kg and at 15-17 feet at a level of 60 µg/Kg. As a semi-volatile, this compound was not detected at all in the sampling of indoor boring #1.

Discussion on the sampling requirement issue is ongoing with the NYSDEC. We will keep you apprised.

New comment. Page 4-8 - The revised report incorrectly reports the concentrations of inorganics in parts per billion. The correct units are parts per million.

RESPONSE
Reporting of inorganics in ppb will be changed to ppm.

Comment 20. The revised report states that bis(2-ethylhexyl) phthalate is considered a laboratory contaminant. However, the data validation process did not reject or estimate all of the data. Therefore, the report should be revised to reflect that the compound is considered a Site contaminant. In addition, acetone and methylene chloride also should be recognized and indicated as soil contaminants.

RESPONSE

The data validator mentions acetone and methylene chloride and bis(2-ethylhexyl)phthlate as laboratory contaminants in the cesspool results and the indoor borings #1 and #2 commentary. A copy of the validator's comments are attached; however, "...this compound (bis(2-ethylhexyl)phthlate) is an extremely common field and laboratory contaminant. If these results are to be used in decision-making process (i.e. risk assessment), caution should be used." Page 2 of the same commentary indicates "...Phthlate esters are common laboratory contaminants."

Therefore, these compounds should be considered to be laboratory and/or field contaminants.

Comment 21. The revised report still does not explain the significant discrepancy in the OVM headspace readings which were used for selecting soil samples for laboratory analysis and the OVM readings noted on the subsurface soil logs. This difference must be addressed. In addition, because neither the Site Remedial Investigation/Feasibility Study workplan nor the Project Operation Plan provided detailed procedures for selecting soil samples for laboratory analysis, procedures were developed in the field. Therefore, it is important that a more detailed description of the procedures used for selecting soil samples for laboratory analysis be provided in the report.

RESPONSE

The sample selection process can be described briefly as the following: as each spilt spoon was removed from the ground, the split spoon was opened by the hydrogeologist and oversight contractor. The description of the soil sample was recorded. The sample was probed and scanned using an organic vapor meter supplied by the consultant and the oversight contractor. The readings were recorded and the sample was put into the appropriate glassware for the Target Compound List analysis. The jar which was to be submitted for analysis for metals was covered with a piece of aluminum foil and capped. This jar was set aside for head space analysis which was to take place in the field.

As part of the selection process, each sample was examined visually to identify anomalous or unusual features (e.g. color or texture) that might warrant its submission for laboratory analysis.

Split spoon samples were collected at five foot intervals to the groundwater interface which was at 60-62 feet below ground surface. After the completion of the boring, the samples were re-analysed using headspace analysis. In the cases where the head space readings did not show significant levels above background, the groundwater interface samples were chosen.

Generally, the two samples with the highest head space readings were chosen for laboratory analysis unless there were other, field-related circumstances (color or texture), which required an additional sample to be submitted to the laboratory.

The sample selection process did not rely on only one selection criterion (e.g. OVM or HNu readings). In every case, the oversight contractor was consulted prior to selecting the samples for laboratory analysis.

Section 4.3 Monitoring Well Installation and Sampling and Analysis-Round 2

Comment 22. The report states that acetone, methylene chloride, and bis (2-ethylhexyl) phthalate are considered laboratory contaminants. However, the data validation process has not rejected or estimated all of the data. Therefore, the report should be revised to reflect that the compounds are considered Site contaminants.

RESPONSE

As mentioned previously, the data validator confirms that the compounds acetone, methylene chloride and bis(2-ethylhexyl)phthlate are common field and laboratory contaminants. We do not believe that they should be considered Site contaminants.

New comment. Page 4-11, first full paragraph - The discussion on inorganics needs to be expanded. Please elaborate and explain which inorganics exceeded MCL limits. Also, identify the trends in the first and second rounds of samples.

RESPONSE

The current text states: "The inorganics which were detected above the method detection limits are itemized in Table 4-8 for the first round of ground water sampling. Table 4-9 lists the inorganics present in the second round of ground water sampling."

This will be expanded to discuss: In the first sampling in April 1992, chromium, iron, lead and nickel exceeded the 1992 NYSDEC maximum contaminant levels (MCL). The November 1992 sampling results illustrated similar results except the MCLs for cobalt and vanadium were also exceeded.

The concentrations of lead and chromium in most ground water samples were significantly higher in MW-2, MW-3 etc.

New comment. As a result of the detection of 1,2 dioxane in monitoring well 3, a third round of groundwater samples should be collected from monitoring wells 2, 3 and 5S. The samples should be tested for the full target compound list (TCL) and be collected on the same date the soil samples at tank 14 are collected.

RESPONSE

The compound 1,2 dioxane was not detected in MW-3. 1,4 dioxane was detected at the estimated level of 110 ppb in the April, 1992 sampling. This compound, also known as 1,4-diethylene dioxide, is a constituent of solvents for cellulose acetate, ethyl cellulose, resins, oils, and waxes. It is also used as a constituent of solutions used to clean laboratory glassware. This compound was not present in any of the monitoring wells in the November, 1992 sampling.

Section 4.4 In-Situ Specific Capacity Tests

Comment 26. Page 4-17 - On the top of the page there is a reference to figure 4-12 concerning a graphic presention of groundwater draw down. However, the referenced figure should be figure 4-2, not figure 4-12. Please amend accordingly.

RESPONSE
We will amend report to indicate Figure 4-2, not Figure 4-12 as requested.

Section 5.1.2 Drywells, Cesspools and Drain Sediments

Comment 37. page 5-7, second paragraph - The revised draft report maintains that there is no continuity of contamination between the soil at 27 feet and groundwater at drywell 2. The draft report bases this conclusion on the OVA screening levels which were taken between 27 feet and the water table. EPA disagrees. There were still measurable OVA readings down to the water table, and no samples were taken to confirm that no VOCs are present. In addition, there may be semi-VOCs and inorganics present, which can not be detected by the OVA. Therefore, the report should not state that there is "no continuity of contamination between 27 feet and the water table."

RESPONSE

As a result of the initial sediment sampling results for drywell #2, we were directed by Dorothy Allen, Project Manager, USEPA to drill through the bottom of the drywell and collect split spoon samples at five foot intervals. Sample selection criteria for the submission to the laboratory was determined to be, as with the other sampling, the samples with the two highest OVM readings.

We will remove references to the lack of continuity of contamination based on OVM readings.

Section 5.2.1 Contaminant Persistence in the Vadose Zone

Comment 40. This section needs to be rewritten to reference the inorganics which were detected in the soils sampled from the installation of monitoring wells 6S and 6D. Data from soils in Hicksville, Long Island (Table 5-7) should not be used.

RESPONSE

Installation of Groundwater Monitoring Wells

During the installation of the upgradient groundwater monitoring wells, inorganic compounds were detected at levels comparable to those in the downgradient wells at the Upper Glacial Aquifer interface and the Magothy interface. The levels of lead and chromium were less than 5 parts per million with the exception of an estimated value of 23 ppm in monitoring well 7D.

Drywells, Drain and Cesspool Sediments

Comment 42. The revised report does not properly address EPA's comment. There are no field data which support the statement on page 5-11 that VOC and semi-VOC contaminants "will be broken down into less complex and nonhazardous organic compounds and ultimately into carbon dioxide and water." Unless or until supported by field data, this statement should be eliminated from the report.

RESPONSE
We will eliminate the references to natural attenuation.

Comment 43. Page 5-12, paragraph 2 - Revise this paragraph to reference the cesspool sample results and any data collected in accordance with requirements of the Nassau County Department of Health. In the statement, "the cesspools are not a future source of chemical compounds", replace "compounds" with "contamination", and the conclusion must be supported by Site data.

RESPONSE
We will change the word "compounds" to read "contamination".

The second round of sampling indicates that there is no contamination present in the vicinity of the former cesspools. We believe that the cesspools do not represent a source of contamination as they were properly abandoned in 1980 following Nassau County protocol. They have not been used since 1980 when the facility was connected to the sanitary sewer system of the Nassau County Department of Public Works.

Section 5.3.2 Saturated Zone

Comment 44. As discussed above and in my letter of August 5, 1993, sample results from samples of upgradient wells MW 6S and MW 6D should be used for background concentrations. Data from Westbury, Long Island should not be referenced. Please remove any discussion relating to Table 5-8 and revise the report to compare on-site values with the values of the upgradient wells.

RESPONSE

The analysis of groundwater samples collected from MW-6S and MW-6D ill be used as background for the site. Table 5-8 will be removed from the RI report.

Section 6.6.1 Nature and Extent of Contamination-Drywells and Drains

Comment 50. Delete the first full paragraph on page 6-7 which states that lead is not a threat to human health.

RESPONSE

The first full paragraph is: "These levels of lead are not a threat to human health as the lead is not located where it could be inhaled or consumed by humans."

This paragraph will be deleted.

Groundwater

Comment 52. The revised report does not include a discussion on lead and chromium, which were detected in the groundwater at elevated levels. Please revise the report to reference these results.

RESPONSE

Elevated levels of chromium and lead were detected in the groundwater samples collected. The concentrations are summarized below:

	Chromium (in ppb)		Lead (in ppb)	
Monitoring Well	April	November	April	November
MW-1S	11*	353	ND	87*
MW-2	317*	1440	74.7*	240*
MW-3	227*	1150	30.2*	71.5*
MW-4	14*	15.5*	ND	10.2*
MW-5S	137*	131	44.4*	33.6*
MW-6S background	**13***	**54.4**	**ND**	**29.4***
MW-7S	33*	19.6	27.9*	27*
MW-1D	132*	19.7*	29.4	17.2*
MW-5D	48*	101	31.4*	40.4*
MW-6D background	**33***	**45.6**	**ND**	**25.2***
MW-7D	18*	47.2	27.9*	25.8*

*estimated value per data validation
ND = not detected

Monitoring wells MW-6S and MW-6D serve to illustrate site background concentrations. It is these levels to which other concentrations are compared. The levels of chromium and lead in these wells varied between the April 1992 and November 1992 sampling.

Metals are ubiquitous. The above variation in concentrations in all wells illustrate that metals are being transported onsite in the groundwater. These data indicate that there are at least two sources of metals in the groundwater - one is offsite and the other onsite. The location of offsite sources are unknown. The onsite sources are some of the drywells.

Also, delete the last sentence from paragraph 1 on page 6-8 of the revised report. Any discussion on a decision on proposed remedial measures is not appropriate for the RI report.

RESPONSE

The sentence "No groundwater remediation is recommended because the New York State Drinking Water Standards allow concentrations of 1,1,1-trichloroethane up to 5 ppb." will be eliminated.

Section 6.1.2 Fate and Transport

Comment 53. page 6-9, first paragraph - Delete "into nonhazardous organic compounds" from line 3.

RESPONSE
The four words will be deleted as requested.

Environmental Standards Inc.

Comments on laboratory contaminants

Organic Data Qualifiers

- Due to the presence of acetone and methylene chloride in field blanks and/or laboratory method blanks, the positive results for acetone and methylene chloride in all samples should be considered "not-detected" and have been flagged "U" on the data tables (Section 2, Part A). For results reported at levels less than the CRQL, the result has been replaced with the CRQL with the appropriate "U" qualifier code.

- Although there is no direct reason to question positive sample results for bis(2-ethylhexyl)phthalate, these results should be used cautiously. Phthalate esters are extremely common laboratory and field contaminants.

- The detection limits for *N*-nitroso-di-*n*-propylamine in sample MW-3 (I204232-02) may be biased low and has been flagged "UJ" on the data tables. Low recoveries were observed for this compound in the associated MS/MSD samples.

- The positive results for methylene chloride and acetone in both Field Blanks (I204231-05 and I204232-09) should be considered estimated and have been flagged "J" on the data tables. High percent relative standard deviations (RSDs)(>30%) were observed for methylene chloride and acetone in the associated initial calibration standards. In addition, high percent differences (>25%) were observed for methylene chloride and acetone in the associated continuing calibration standards.

- The reported concentration for bis(2-ethylhexyl)phthalate in samples MW-1D (I204231-02), MW-6S (I204231-03) and MW-6D (I204231-04) should be considered estimated and have been flagged "J" on the data tables. A high percent difference (>25%) was observed for bis(2-ethylhexyl)phthalate in the associated continuing calibration standards.

- The detection limits for *delta*-BHC in sample MW-5D (I204232-07) may be higher than reported and have been flagged "UJ" on the data tables. High percent differences (>15%) were observed for this compound on the quantitation and confirmation columns (the %D value was >20% on the confirmation column). The percent differences were in the direction of a sensitivity decrease.

- Good analytical precision was observed for 1,1,1-trichloroethane between samples MW-3 (I204232-02), MW-3MS (I204232-02MS) and MW-3MSD (I204232-02MDS). This non-matrix spike compound was detected at 8 µg/L, 9 µg/L and 9 µg/L, respectively.

- Positive sample results reported at concentrations less than the Contract Required Quantitation Limit (CRQL) should be considered estimated and appear on the data tables with the appropriate "J" qualifier code.

- Due to the presence of lead and zinc in the field blanks, the results for these analytes in the following samples are unreliable and have been flagged "R" on the data tables. The analytical results below are usable to the extent that levels higher than those reported are not present. For all intents and purposes, the reported positive results should now be considered the detection limits.

Analyte	Affected Samples
lead	MW-1S, MW-4, MW-6D and MW-6S
zinc	MW-12, MW-2, MW-3 and MW-6D

- The following positive results and detection limits for aluminum and chromium have been qualified as estimated on the sample data table and should be considered estimated. Low recoveries (<75%) were reported for aluminum and chromium in the pre-digestion matrix spike analysis of sample MW-3. It should be noted that acceptable recoveries were obtained for the post-digestion matrix spike analysis of sample MW-3, indicating digestion loss as the probable cause of the low pre-digestion matrix spike recoveries for chromium and aluminum.

Element	Sample Results Flagged "J"	Detection Limits Flagged "UJ"
aluminum	FB-1, MW-12, MW-1D, MW-2, MW-3, MW-5D, MW-5S and FB-2	
chromium	All positive sample results	FB-1 and FB-2

- The positive result for mercury in sample MW-3 has been flagged "J" on the sample data table and should be considered estimated. The laboratory duplicate analysis of sample MW-3 resulted in a high relative percent difference for mercury.

- The positive results for lead in all samples have been flagged "J" on the sample data table (unless previously flagged "R" due to field blank contamination) and should be considered estimated. The laboratory control sample associated with all project samples displayed a high recovery (>120%) for lead.

- The analysis for selenium in sample MW-2 has been flagged "R" and the analysis for selenium in the sample should be considered unreliable. The sample was analyzed twice for selenium using the Method of Standard Additions; both analyses resulted in very low (<0.990) correlation coefficients.

4. The Forms IV through VIII associated with the low-level aqueous volatile analysis of samples Field Blank (3/9/92), Field Blank (3/10/92) and Field Blank (3/12/92) were incorrectly labelled with the instrument identification number 5995C; the correct instrument identification number is 5995A. In addition, Forms IV through VII associated with the low-level soil volatile analysis of samples MW-7D (56-58') and MW-7D (114-116') were incorrectly labelled with the instrument identification number 5995D; the proper identification number is 5995C. The data tables in Section 2 reflect the actual instrument identification numbers used in the analyses.

5. The laboratory identified 4-chloroaniline and bis(2-ethylhexyl)phthalate in sample MW-5D 5-7' in the raw data but did not list the positive quantitations for these semivolatile compounds on the associated Form I. The data reviewer confirmed the presence of these compounds after examining the raw data and has entered the results on the Form I and the data table. It should be noted that the presence of bis(2-ethylhexyl)phthalate in this sample was later considered "not detected" due to contamination by this compound at a comparable level in an associated field blank.

6. The response factor for semivolatile compound 2,4-dinitrophenol in the 20 ppb standard associated with the semivolatile calibration performed 3/18/92 was incorrectly reported as "0.000" on the Form VI. The correct response factor was calculated as "0.025" by the data reviewer; the quantitation report associated with the 20 ppb standard was observed with a very low area count for this compound. However, the data reviewer feels that the laboratory correctly chose not to include this 20 ppb response factor in calculations due to poor performance which was not indicative of the compound response in the other standards. Consequently, the average response factor (RRF) and relative standard deviation (%RSD) calculated for 2,4-dinitrophenol in this initial calibration represent only the 50, 100, 120 and 160 ppb standards.

7. The data reviewer could not verify the analysis time and date recorded on the Form V for the DFTPP tune which was reported as performed on 3/30/92 at 9:13 on instrument 5995B since the associated raw data did not have the actual analysis date and time recorded. The data reviewer has assumed that the Form V analysis information was correct.

8. The percent relative abundance of mass ion 70 (relative to mass ion 198) in the following DFTPP tunes were incorrectly reported by the laboratory on the Form V's. The raw data did not support the reported values; the actual values were recorded on the Form V's by the data reviewer. Associated data quality was not affected.

Comments

1. Based on the information provided on the VOA analyses for samples DW#1 25'-27', DW#1 30'-32' and DW#6 35'-37', it appears that the decision to analyze these samples by the medium-level protocol may not have been warranted. Similarly, the 5-fold dilutions performed for the semivolatile analyses for samples DRAIN, DW#9, DW#5 and possibly DW#7 do not appear to have been warranted. It is possible that the laboratory's screening data justify these actions.

2. Very high recoveries (up to 1900%) were observed for the pesticide surrogate compound dibutylchlorendate (DBC) in the majority of soil samples. These recoveries are likely due to the coelution of a contaminant (e.g., phthalate esters) with the surrogate. Because of this problem, method performance for pesticides/PCBs on a sample-specific basis cannot be assessed. In addition, chromatographic stability (viz., assessment of chromatographic shift) could not be assessed. This is of concern because a number of pesticides were outside the established retention time windows in the closing calibration checks.

With regard to data usability, the principal areas of concern include blank results, holding times, internal standard areas and calibrations. Based upon the data packages reviewed, the following organic data qualifiers are offered. It should be noted that the following data usability issues represent an interpretation of the quality control results obtained for the project samples. Quite often, data qualifications address issues relating to the sample matrix problems. Similarly, the validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the following data usability issues should not necessarily be construed as an indication of laboratory performance.

Organic TCL Data Qualifiers

- Due to the presence of methylene chloride, toluene and bis(2-ethylhexyl)phthalate in field blanks, trip blanks and/or laboratory method blanks, these compounds in the following samples should be considered "not-detected" and have been flagged "U" on the data tables (Section 2, Part A). For results reported at levels less than the CRQL, the result has been replaced with the CRQL with the appropriate "U" qualifier code.

Compound	Applicable Samples
methylene chloride	All positive soil sample results.
toluene	DW#3

With regard to data usability, the principal areas of concern include blank results, holding times, internal standard areas and calibrations. Based upon the data packages reviewed, the following organic data qualifiers are offered. It should be noted that the following data usability issues represent an interpretation of the quality control results obtained for the project samples. Quite often, data qualifications address issues relating to the sample matrix problems. Similarly, the validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the following data usability issues should not necessarily be construed as an indication of laboratory performance.

Organic Data Qualifiers

- Due to trace-level presence of methylene chloride and acetone in the method, field and/or trip blanks, the reported presence of these compounds in the following samples should be considered "not-detected" and they have been flagged "U" on the data tables. Furthermore, results that were reported below the quantitation limit were replaced by the quantitation limit with the appropriate "U" qualifier.

Compound	Sample(s)
acetone	All analytical samples
methylene chloride	All analytical samples
bis(2-ethylhexyl)phthalate	MW1D (120-122')[Lab#I111142-04]

- Although there is no direct reason to question the presence of bis(2-ethylhexyl)phthalate in samples MW-1D (59-63')[Lab#I111142-02] and MW-6D (60-62')[Lab#I11185-01], this compound is an extremely common laboratory and field contaminant and was detected in a field blank not associated with the aforementioned samples. If these results are to be used in the decision-making process (viz., risk assessment), extreme caution should be exercised.

- The actual detection limits for all VOA compounds in samples MW-6D (60-62')[Lab#I111185-01] and MW-6S (74-76')[Lab#I111185-02] may be higher than reported and have been flagged "UJ" on the data tables unless previously flagged. The aforementioned samples were analyzed 13 days after the date of sample receipt which is in excess of the U.S. EPA Region II recommended 10-day holding time for data validation.

Compound	Applicable Samples
bis(2-ethylhexyl)phthalate	DW#1 25'-27', DW#1 30'-32', DW#6 35'-37', DW#6 30'-32', DW#7 45'-47', DW#4, DW#4RE, DW#1, DW#1RE, DW#5, DW#5RE, DW#7, DW#8, DW#8RE, DW#9, DRAIN, DW#1MS/MSD and DW#1MS/MSDRE

Although the results for methylene chloride, toluene and bis(2-ethylhexyl)phthalate in several of the aforementioned samples may appear to be substantial, they actually represent instrument concentrations similar to those observed in the blank(s) subsequently multiplied by large dilution factors.

- All positive soil sample results for acetone are unreliable and have been flagged "R" on the data tables. According to verbal indications from project management, acetone was used as a field equipment decontamination solvent.

- The analyses for 2-nitroaniline in samples Field Blank 821, DW#2, DW#3, DW#6, DW#7, DW#8, DW#9, DRAIN and DW#1MS/MSDRE are unreliable and have been flagged "R" on the data tables. A zero response factor was obtained for 2-nitroaniline in the associated calibration check standard. It is possible that a "normal" response was obtained, but the automated search and quantitation data system procedures "missed" the detection for 2-nitroaniline.

- The analyses for indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene in samples RB-1, DW#1MS/MSD and DW#5 and chloroethane in sample DRAIN are unreliable and the results have been flagged "R" on the data tables. High percent differences (>90%) were obtained for these compounds in the associated calibration check standard.

- The analyses for *delta*-BHC, endosulfan II, 4,4'-DDD, endosulfan sulfate and endrin ketone in samples DW#3, DW#4, DW#5, DW#6, DW#7, DW#8, DW#9 and DRAIN are unreliable and the results have been flagged "R" on the data tables. These pesticides were outside of the established retention time windows in the calibration standards run following these samples. The lack of meaningful DBC shift information (see Comment #2) exacerbated this assessment.

- The positive results for *alpha*-BHC, *beta*-BHC, dieldrin, 4,4'-DDE, endrin, methoxychlor, *alpha*-chlordane and *gamma*-chlordane should be used with caution. Although the peaks that these identifications were based on were within the established retention time windows, examination of the chromatograms revealed numerous

SOILS magazine article

"Is it really contamination-or is it just plastic?"

Is it really contamination— or is it just plastic?

Common component of plastic emits acid that can yield false alarm sample results

By Brian Sullivan and David Carty

Did you know that the plastic tubing and vials commonly used in sampling contains—and emits—phthalic acid, which is a semivolatile organic compound? And did you know that the widespread presence of phthalic acid in laboratory instruments may well be contaminating your environmental samples?

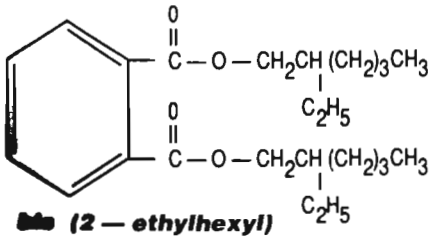
Brian Sullivan is environmental scientist and David Carty is senior scientist and lab director for K.W. Brown & Associates, Inc., College Station, Texas.

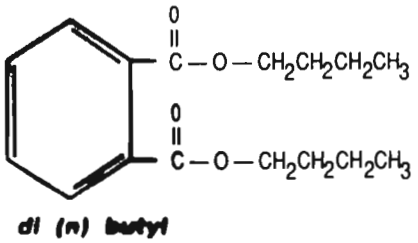
Phthalic acid is the ortho isomer of benzene dicarboxylic acid. The most common use of this compound is to esterify its carboxylic groups with various alcohols to produce phthalic acid esters (PAEs) to incorporate as cross linking agents in plastic formulations—along with vinyl chloride, styrene and propylene. The PAEs help confer elasticity and malleability to plastic products.

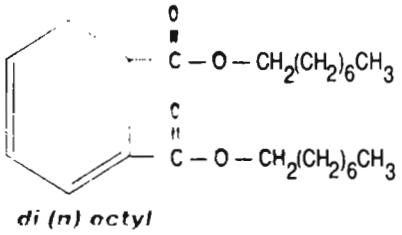
PAEs are readily released from plastic materials in potentially significant quantities. The characteristic smell associated with the vinyl interior of a new car—as well as the eventual brittleness and cracking of the vinyl over time—are, in large part, due to the release of PAE constituents. PAEs are ubiquitous environmental contaminants and are known to have toxicological effects on biological organisms.

Current PAE analytical methodologies are inadequate to allow for the exclusion of inadvertently introduced PAE contamination during analysis of environmental samples.

Problems arising from cross contamination of PAEs originating in the laboratory environment have been recognized for at least 30 years. Studies in the late '60s and early '70s documented the occurrence of PAE cross contamination from containers, laboratory water, tubing, packaging, solvents and filter paper.







Chemical structure of some typical phthalate acid ester compounds.

The EPA approved, solid waste method for analysis and quantification of PAEs is Method 8060. A report based on research conducted under the auspices of the EPA Single Laboratory Evaluation Program identified the following sources as contributing to potential PAE contamination in the course of using Method 8060: organic solvents, reagent water, common laboratory materials such as Florisil, alumina, silica gel, sodium sulfate, glass wool, filter paper, paper thimbles, aluminum foil and glassware.

For all reagents and materials tested, PAEs were detected in the parts per trillion to parts per billion range. Washing glass wool and sodium

sulfate with 1-1 hexane-acetone solutions for two consecutive 16 hour sessions was insufficient to remove PAEs. Solvent pre-cleaning of paper filters in a Soxhlet extractor also failed to consistently eliminate detectable levels of PAEs. Even after three days of washing with hexane-acetone with daily replacement of solvent and solvent flasks a Soxhlet extractor still yielded sample blank levels of PAEs as high as 0.5 ppb.

This same report concludes that EPA Method 8060 is inadequate to address background contamination, and recommends stringent measures to eliminate background PAEs—such as use of pesticide-grade solvents, testing all solvent batches received from commercial suppliers, and exhaustive Soxhlet extraction of paper thimbles and filter paper.

However, it is not certain that even such extraordinary precautions would be uniformly effective. Evaluation of heat-treated, PAE-free glassware after two weeks of shelf storage detected measurable quantities of PAE contamination. Thus, the possibility of ubiquitous airborne PAE contamination must be considered. For instance, in 1965, M. Blumer reported in *Contamination Control,* the discovery of heavy PAE contamination in solvents which had recently been double distilled. Plastic materials used in the lab's ventilation system were eventually identified as the source of the PAEs. Another report detected PAEs from air conditioning vents with levels of bis(2-ethylhexyl) phthalate measured as high as 35 ng/m3.

In its newly revised form 18, Method 8060 is designed to evaluate 11 target PAEs. EPA Method 8270, which uses similar reagents and materials as 8060, lists six PAE constituents among 188 semi-volatile target constituents. The adequacy of Method 8270 to address background PAE contamination must also be questioned.

PAEs and hydrocarbons

The hydrocarbon constituents of petroleum constitute an extremely complex and heterogeneous mixture. The colloidal nature of soils permits significant quantities of these materials to be adsorbed to the soil matrix. This is especially true for soils of refinery waste land treatment units, which typically receive large volumes of refinery wastes over a long period of time. Due to differential degradation rates, soils at such sites typically exhibit much higher proportions of non-hazardous macromolecular compounds, such as saturated aromatic and asphaltene constituents compared to lighter (one and two ring) aromatic hydrocarbon constituents.

For successful sample analysis, gas chromatograph retention capacity and mass spectrometer calibration limits must not be exceeded. Therefore, evaluation of low molecular weight sample constituents in soil samples

Continues on page 39→

Is it just plastic? from page 7

obtained from such sites often require extensive cleanup treatments and/or sample dilution to remove sample interferences. In general, samples of refinery waste affected soil are more likely to come into contact with a greater quantity of laboratory materials and be subject to higher solvent-to-sample ratios as compared to other waste-media combinations.

Should PAE contamination be introduced when samples are already at a high level of dilution, ppb or even ppt quantities of introduced PAEs will yield significant PAE concentration values when measurements are back-calculated to adjust for dilution factors. As a result, hydrocarbon contaminated soils may be particularly susceptible to the problem of PAE contamination.

Six PAEs appear on the EPA Skinner List of commonly occurring hazardous constituents in petroleum refinery waste. The Skinner List originally appeared in an April 3, 1984 memorandum from John Skinner, director of the Office of Solid Waste, to the Hazardous Waste Permit branch chiefs of all the EPA regions. But, in 1984, EPA was just developing the Resource Conservation and Recovery Act (RCRA) facility permitting program. The source of much, if not all, the refinery wastewater semi-volatile organic analytical database in the Skinner List was obtained with EPA Method 625 (base/neutrals and acids) and possibly Method 606 (PAEs). However, during that time, Methods 606 and 625 were themselves still in developmental stages. Prior to EPA's 1984 publication of the amended version of *Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act* (49 FR 2636), there were no mandatory rules for sample containers, preservatives or holding time with those methods. In particular, quality assurance and quality control guidelines were poorly defined at that time. Prior to 1984, the response to PAE analytical interference problems was not uniform, but varied from lab to lab.

Thus, it is possible that artifact PAE analytical results were included in the database when the Skinner List was compiled.

Senior refinery chemists from five major U.S. corporations engaged in petroleum refining agree that PAEs are not expected to be a constituent of crude oil or of petroleum refining waste. None of the chemists knows of any petroleum refining process in which PAEs are generated or introduced.

Various EPA policies indicate agency recognition of the difficulties regarding sample contamination with PAEs derived from lab equipment and reagents. In some cases, the recognition in implicit in the consideration given to PAEs in terms of overall data evaluation and quality assurance and quality control.

The Superfund program includes PAEs along with four other organic chemicals (acetone, 2-butanone, methylene chloride and toluene) as common laboratory contaminants. PAEs are categorized as organic chemicals which, "may be introduced into a sample from laboratory cross contamination, not from the site." In addition, the designated common laboratory contaminants are to be considered as positive detections, "only if the concentrations in the sample exceed ten times the maximum amount detected in any blank."

The EPA's Contract Laboratory Program (CLP) establishes guidance and performance criteria for analytical laboratories engaged in Superfund work. The CLP *Statement of Work for Organic Analysis* establishes quantitation limits for target semivolatile compounds. The target compound list includes 97 semivolatile compounds, including six PAE compounds. Flexibility in the establishment of method blank acceptability criteria is conferred solely on the six PAE constituents. For all other semivolatile constituents, method blanks must contain less than or equal to the quantitation limit for each constituent. But, concentrations in method blanks must be less than or equal to five times the quantitation limit for the six PAEs. Thus, it is apparent that EPA Superfund administrators recognize the difficulty of excluding ubiquitous PAE contaminants from analytical laboratory procedures.

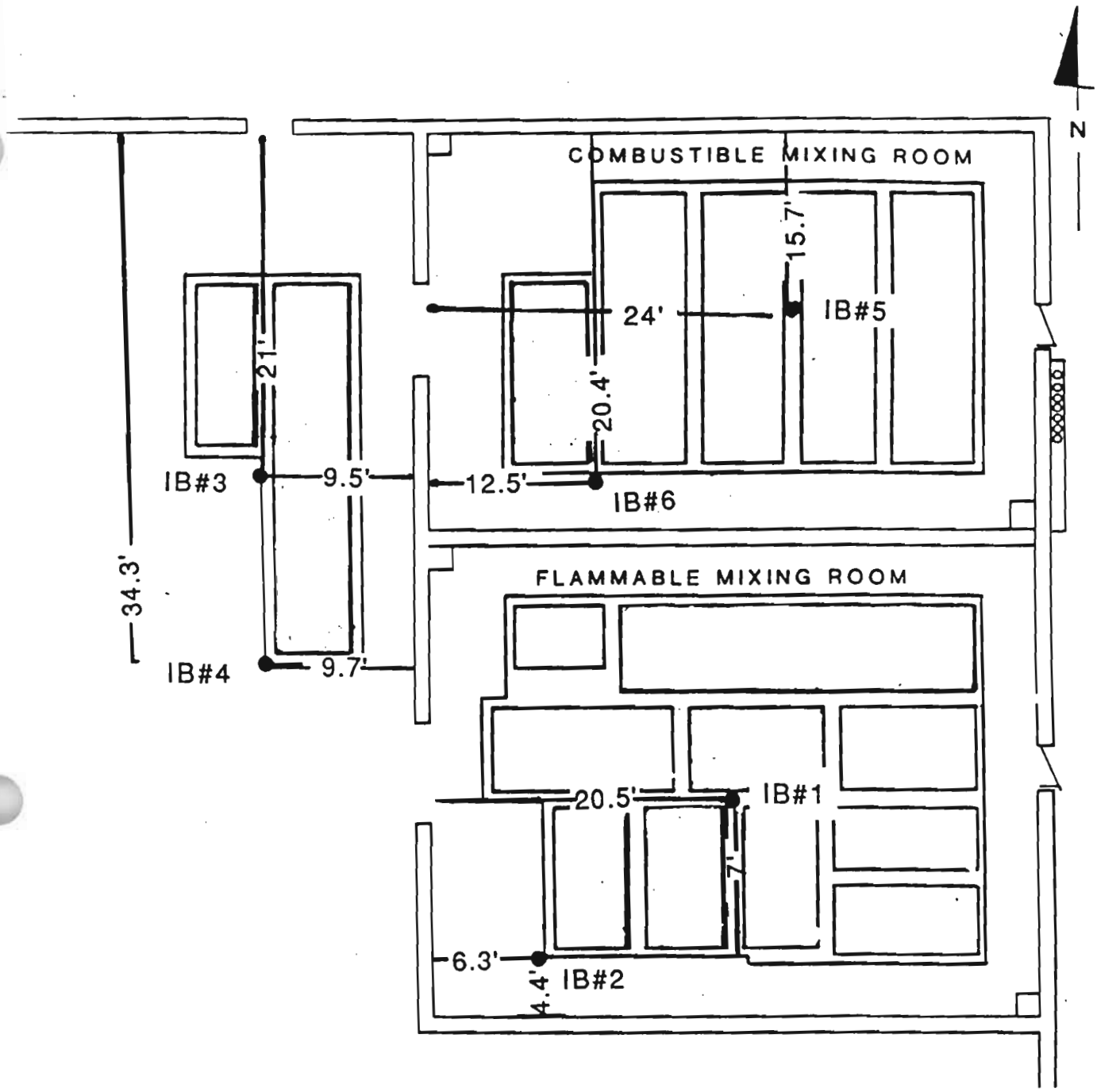
At least one EPA Regional headquarters has publicly commented on the general lack of validity of PAE data. In reference to PAEs, Region VIII stated in a 1991 Record of Decision that, "these compounds are ubiquitous laoratory contaminants and are recognized plasticizers...it is almost impossible to eliminate them from the laboratory environment and consequent detection. They have been reported in almost all data sets, in background, monitoring areas and in quality control blanks. As such, their value as measurements of potential contamination is nonexistent."

While various segments of the environmental regulatory community are aware of the widespread problem of PAE cross contamination in environmental samples, there is no coherent, uniform policy to address the problem. The potential exists for random and sporadic artifact PAE detections in environmental samples to be misinterpreted as authentic environmental contamination, or to lead to unrealistic demands for total elimination of such data. While such controversies are resolvable, the resolution often comes about only after expensive delays.

Earlier versions of analytical methods may have grossly misrepresented the true frequency of PAE occurrence in hydrocarbon wastes. Current analytical technologies cannot consistently eliminate artifact PAE contamination in environmental samples.The absence of a critical analytical evaluation to address these issues begs the creation of a uniform policy. All the evidence combined indicates that the detection of PAEs, in the absence of other, non-PAE hazardous organic constituents is of little or no value as an indicator of hydrocarbon contamination in environmental soil and water samples.■

Write in 5000 for more information

Revised figures and tables

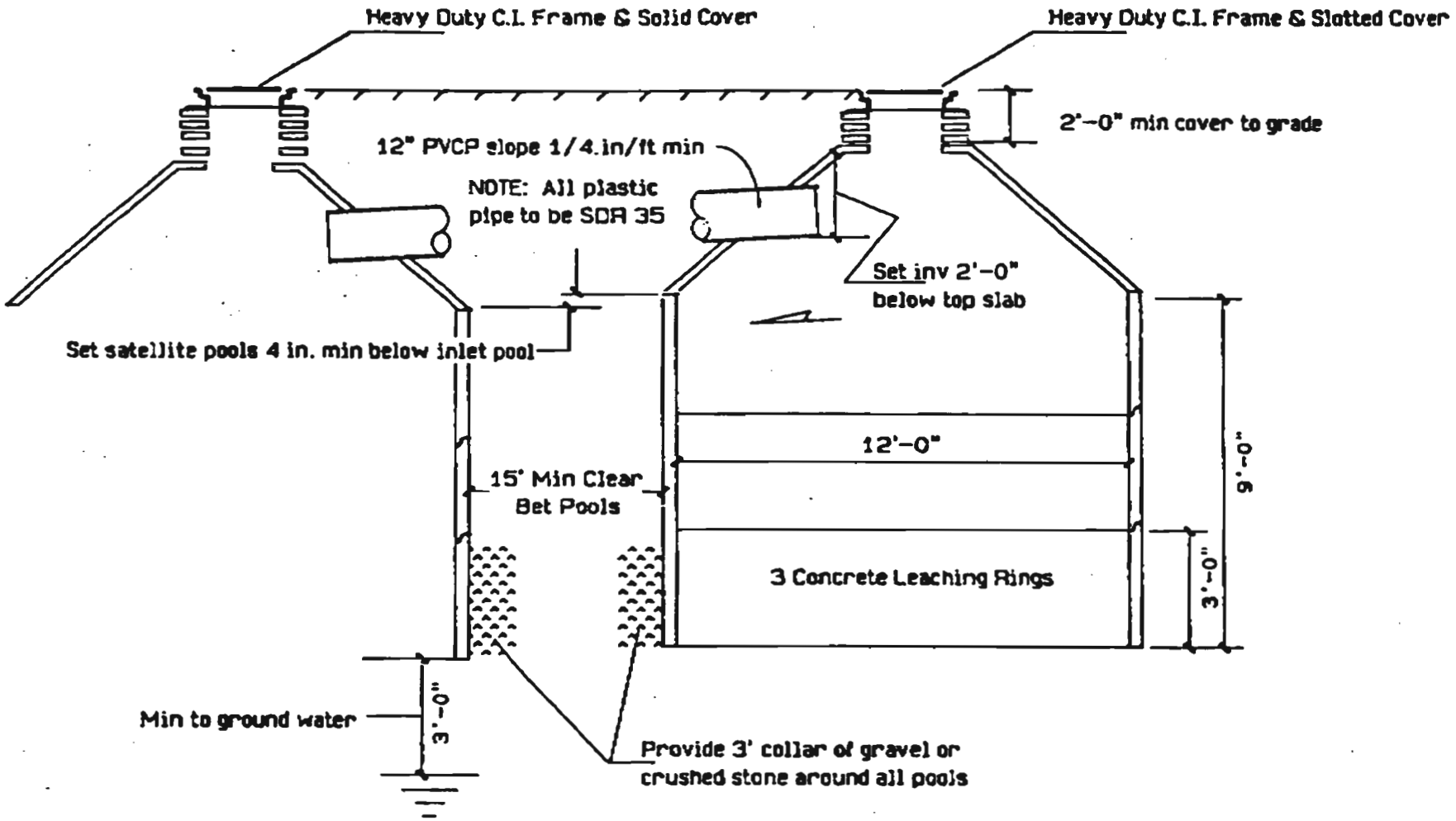


EXPLANATION

● BORING LOCATION

FROM: Roux, 1991.

TITLE: LOCATION OF INDOOR BORINGS 302795	
ANSON ENVIRONMENTAL LTD.	FIGURE NO. 4 - 1



Typical Leaching Pool Detail

Scale 1/4"= 1'0"

302796

Anchor Chemical Site
500 West John Street
Hicksville, New York

Table 4-1- Volatile and Semi-Volatile Organic Compounds in the Drywell #2 August 1991 (in ppb)

VOLATILE COMPOUNDS		(ppm) Rec. Soil Cleanup Obj.
1,1-Dichloroethane	1600*	0.2
1,1,1-Trichloroethane	3300*	0.8
Toluene	4800*	1.5
Ethylbenzene	4800*	5.5
Total Xylenes	67000*	1.2
SEMI-VOLATILE COMPOUND		
Naphthalene	9800/9500**	13
2-Methylnaphthalene	4100/3900**	36.4
Phenanthrene	*370/320**	50

*=estimated
** analyzed twice for laboratory control purposes

ppb x 10EXP-3 = ppm

Anchor Chemical Site
500 West John Street
Hicksville, New York

Table 4-2- Semi-Volatile Organic Compounds in the Drywells and Drain-August 1991 (in ppb)

	DRYWELL									
	1	2	3	4	5	6	7	8	9	DRAIN	Rec. Soil Cleanup Obj. (ppm)
SEMI-VOLATILE COMPOUND											
Benzoic Acid					53*						2.7
Naphthalene		9000									13
2-Methylnaphthalene		4100									36.4
Phenanthrene		370*		260*				1000*	260*	190*	50
Anthracene								390*			50
di-n-Butylphthlate		2400*			63*					480*	8.1
Fluoranthene		300*		700*				3700	440*	410*	50
Pyrene				790*	34*			3700	340	320	50
Butylbenzylphthlate		5100	1100*		64*	5100			370*	300*	50
Benzo(a)anthracene				490*				1600*		216	0.224 or MDL
Chrysene				520*				1900*	250*	230*	0.4
Benzo(b)fluoranthene				100*				2900*			1.1
Benzo(k)fluoranthene				560*				1700*			1.1
Benzo(a)pyrene				580*				1400*			0.061 or MDL
Ideno)1,2,3-cd)pyrene								1500*			3.2

*estimated in all wells or in well specified
MDL = Method Detection Limit

ppb x 10EXP-3 = ppm

Anchor Chemical Site
500 West John Street
Hicksville, New York

Table 4-3- Inorganic Analytes in the Drywells and Drain-August 1991 (In ppm)

		DRYWELL										
		1	2	3	4	5	6	7	8	9	DRAIN	Rec. Soil Cleanup Obj. SB = 6D
INORGANIC ANALYTE												(ppm)
aluminum	*	2630	7830	4850	2030	1580	9910	3310	11100	2860	1410	SB 811
antimony			9.6*						9.5*			SB -
arsenic	*	1.2	3.7	3	6.4	0.79		1.6	3.6	1.2	1.5	7.5 or SB 0.8
barium		18.2	90.2	44	34.4	9.7	82.1	15.3	56	23.3	20	300 or SB -
calcium	*	9700	16300	22900	7100	1300	9210	8130	22800	4220	3650	SB -
chromium		36.1*	463*	101*	31.7*	17.4	240*	54.2*	198*	37.4*	71.0*	10 or SB 3.4
cobalt		4.2	8.7	7.5			11.2	3.1	11.3	5.4	3.4	30 or SB -
copper	*	17.7	266	49.4	18.2	5.3	80.2	27	130	41.7	44.4	25 or SB -
iron	*	6410	19500	11500	6630	3810	2040	7260	22700	10900	15600	2,000 or SB 1960
lead		124	1210	607	154	81.3	1120	157	1620	122	216	SB 2.1
magnesium	*	5200	9350	10900	3460	950	6870	3750	14100	2810	1150	SB 28.5
manganese	*	54.6	152	94.1	55.9	53.3	120	62.8	162	189	135	SB 25.4
mercury			0.21*									0.1 -
nickel	*	8.3	21.5	12.6	7.2	4.7	18.9	9.3	20.4	11.3	17.4	13 or SB -
potassium		327	459	332	207	221	615	186	548	260	215	SB -
sodium		262	948*	474*			993*		1240*	447*	494*	SB -
thallium			0.33				0.28*					SB -
vanadium		22.6	79.1*	41.1*	20.5*	5.3*	71.2*	18.6*	81*	28.4*	17.0*	150 or SB -
zinc		81.3	1770*	236*	103*	24.6*	512*	78.5*	675*	138*	254*	20 or SB -
cyanide			430*					2.9*				SB -

*estimated in all wells or in well specified

Anchor Chemical Site
500 West John Street
Hicksville, New York

Table 4-4-Pesticides in the Drywells and Drain-August 1991 (In ppb)

	DRYWELL										
	1	2	3	4	5	6	7	8	9	DRAIN	Rec. Soil Cleanup Obj. (ppm)
PESTICIDE											
alpha-BHC		183									0.11
beta-BHC									8.2*		0.2
Aldrin	5.1*										0.041
Dieldrin		106*	87*	16*		18*	19*	42*			0.044
4.4'-DDE		146*	41*	50*		75*	10*	48*			2.1
Endrin		36						12*			0.1
Methoxychlor		22*	39*	126*		24*	7.5*	52*	14*		<10
alpha-Chlordane	7.7*										0.54
gamma-Chlordane	6.2*						3.4*	29*			0.54

*estimated in all wells or in well specified
Note: Drywell #5 and the Drain did not contain pesticides above the method detection limit for that compound

ppb x 10EXP-3 = ppm

Anchor Chemical Site
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Hicksville, New York

Table 4-8- Inorganics in Groundwater-Round 1-April 1992 (ppb)

Inorganic Analyte	MW 1D	MW 1S	MW 2	MW 3	MW 4	MW 5D	MW 5S	MW 6D	MW 6S	MW 7D	MW 7S	1992 NYSDEC MCL
aluminum	3020*		5600*	2260*		1670*	1780*					NS
arsenic												25
barium	37*	10*	38*	68*	27*	54*	11*	7*	35*	53*		1000
cadmium											4	10
calcium	19000	9200	5880	11500	9290	23600	25200	12400	19300	16300	6820	NS
chromium	132*	11*	317*	227*	14*	48*	137*	33*	13*	18*	33*	50
copper			74*	115*		59*	108*			37*		200
iron	3990	490	7990	4510	615	1920	3470	458	707	754	489	300
lead	29.4		74.7*	30.2*		31.4*	44.4*			27.9*	27.9*	25
magnesium	2180	1120	1310	1800	1500	558	1580	1670	2450	1720	651	35000
manganese	32	25*	95*	74	53*	23*	52*	92*	43*	35*	26*	300
mercury				.2*								2
nickel	38	14	17	50		28*	92	22		22	21	NS
potassium	3010		2340	2590		61500		5010	2680	2540	4820	NS
sodium	41200	19700*	19300*	25400	3600*	38700	2920*	12700*	14000*	16100*	4850*	20000
vanadium	6		13									NS
zinc	45	50			76	66	67		48	61	45	300
cyanide												100

*estimated
MCL = maximum contaminant level (ug/L)
NS = no standard

Anchor Chemical Site
500 West John Street
Hicksville, New York

Table 4-9 - Inorganics In Groundwater-Round 2 - November, 1992 (ppb)

Inorganic Analyte		MW 1D	MW 1S	MW 2	MW 3	MW 4	MW 5D	MW 5S	MW 6D	MW 6S	MW 7D	MW 7S	1992 NYSDEC MCL
aluminum	*	314	35100	53100	34300	1690	3320	1710	353	803	675	890	NS
arsenic			7.2*	9.2	6.4								25
barium	*	39.8	110	230	169	56	79.5	46.6	45.1	75.7		63.8	1000
cadmium													10
calcium	*	6980	25400	9750	16100	9490	50500	20700	13900	24200	6360	9080	NS
chromium		19.7*	353	1440	1150	15.5*	101	131	45.6	54.4	47.2	19.6*	50
cobalt			10.5	16.1	20.3								5
copper	*	36.2	169	123	179	26	112	102	33	79.8	36.9	75.1	200
iron	*	558	28300	40900	31300	1830	2450	3420	634	1370	1520	1230	300
lead	*	17.2	87	240	71.5	10.2	40.4	33.6	25.2	29.4	25.8	27	25
magnesium	*	827	2890	2750	3070	1530	2610	1870	1970	2760	645	1010	35000
manganese		8.2	226	436	482	64.6	68.8	44.4	20.9	58.4	22.7	14.3	300
mercury			0.09	0.17	0.06			0.06					2
nickel			97.4	51.9	64		23.8	63.2	20.9		8.2		NS
potassium	*	2540	4510	5860	4920	1930	3500	2150	2270	4620	1010	7050	NS
sodium		21700	39600	52500	24600	6820	27000	2090	11100	10600	2170	4160	20000
vanadium			41.9	72.4	53.2								NS
zinc	*	67.7	229		73.6	94.4	342	173	94.2	97	154	70.7	300
cyanide													100

*estimated in all wells or in well specified
NS = no standard

MCL = maximum contaminant level (ug/L)

Table 5-1 Concentration of Analytes found in Drywell #2 at Various Depths (µg/Kg)
(ppb)

Analyte	Surface	15-17 feet	25-27 feet	Background*	Rec. Soil Cleanup Obj. (ppm)
1,1-dichloroethane	1600	ND	ND	ND	0.2
1,1,1-trichloroethane	3300	ND	ND	ND	0.8
toluene	4800	2300	ND	ND	1.5
ethylbenzene	4800	4800	ND	ND	5.5
total xylenes	67000	82000	ND	ND	1.2
naphthalene	9800/9500	290	ND	ND	13
2-methylnaphthalene	4100/3900	150	ND	ND	36.4
phenanthrene	370/320	58	ND	ND	50
di-n-butylphthlate	2400/2500	100	ND	ND	8.1
fluoranthene	300	69	ND	ND	50
butylbenzylphthalate	5100/5200	410	ND	ND	50
bis(2-ethylhexyl)phthalate	25000/27000	ND	ND	36	50
pyrene	ND	66	ND	ND	50
4-chloro-3-methylphenol	ND	ND	570	ND	0.240 or MDL
aroclor 1254	ND	230	ND	ND	NS
MEASURED IN ppm					
chromium**	463	392	32.9	3.4	10 or SB
lead**	1210	130	4.6	2.1	SB

* from MW #6D soils
** units are mg/Kg
ND=None Detect
NS = No Standard
SB = Site Background

ppb x 10EXP-3 = ppm

Table 5-4 Concentration of Analytes found in Drywells #1, 6 & 7 at Various Depths (µg/Kg)

Analyte						(ppm)
Drywell #1	**Surface**	**25-27 feet**	**30-32 feet**	**Background***		**Rec. Soil Cleanup Obj.**
bis(2-ethylhexyl)phthalate	9700/11000	ND	ND	36		50
chromium**	36.1	ND	ND	3.4		10 or SB
lead**	124	1.8	2.5	2.1		SB
Drywell #6	**Surface**	**30-32 feet**	**35-37 feet**	**Background***		
toluene	5	ND	ND	ND		1.5
butylbenzylphthalate	5100	ND	ND	ND		50
bis(2-ethylhexyl)phthalate	26000	ND	ND	36		50
Dieldrin	18	ND	ND	ND		0.44
4,4'-DDE	75	ND	ND	ND		2.1
Methoxychlor	24	ND	ND	ND		<10
chromium**	240	7.6	6.7	3.4		10 or SB
lead**	1120	6.7	1.8	2.1		SB
Drywell #7	**Surface**	**40-42 feet**	**45-47 feet**	**55-57 feet**	**Background***	
carbon disulfide	5	ND	ND	ND	ND	2.7
bis(2-ethylhexyl)phthalate	ND	ND	ND	ND	36	50
Dieldrin	19	ND	ND	ND	ND	0.44
4, 4'-DDE	10	ND	ND	ND	ND	2.1
Methoxychlor	7.5	ND	ND	ND	ND	<10
gamma-Chlordane	3.4	ND	ND	ND	ND	0.54
chromium**	54.2	ND	ND	ND	3.4	10 or SB
lead**	157	1.0	0.78	0.84	2.1	SB

* from MW #6D soils

** units are mg/Kg

ND = None Detect

SB = Site Background

Table 5-4a Concentration of Analytes found in Drywells #3, 4. 5, 8, 9 and Drain (µg/Kg)

Analyte	DW 3	DW 4	DW 5	DW 8	DW 9	DRAIN	BACKGROUND*	(ppm) Rec. Soil Cleanup Obj.
carbon disulfide	ND	ND	ND	ND	21	ND	ND	2.7
toluene	ND	64	ND	200	ND	ND	ND	1.5
benzoic acid	ND	ND	53/73	ND	ND	ND	ND	2.7
phenanthrene	ND	260/310	ND	1800/1500	260	190	ND	50
anthracene	ND	ND	ND	390	ND	ND	ND	50
di-n-butylphthalate	ND	ND	63/72	ND	ND	480	ND	8.1
fluoranthene	300	700/810	ND	3700/3400	440	410	ND	50
butylbenzylphthalate	1100/1100	ND	64/48	ND	370	300	ND	50
bis(2-ethylhexyl)phthalate	26000/21000	ND	ND	ND	ND	ND	36	50
pyrene	ND	790/860	/34	3700/4500	340	320	ND	50
benzo(b)fluoranthene	ND	1000/1000	ND	2900/2700	ND	ND	ND	1.1
chrysene	ND	520/590	ND	1900/2000	250	230	ND	0.4
benzo(a)anthracene	ND	/490	ND	1600/	ND	ND	ND	0.224 or MDL
benzo(k)fluoranthene	ND	560/500	ND	1700/1700	ND	ND	ND	1.1
benzo(a)pyrene	ND	580/590	ND	1400/1100	ND	ND	ND	0.061 or MDL
indeno(1,2,3-cd)pyrene	ND	ND	ND	/1500	ND	ND	ND	3.2
beta-BHC	ND	ND	ND	ND	8.2	ND	ND	0.2
dieldrin	87	16	ND	42	ND	ND	ND	0.044
4.4'-DDE	41	50	ND	48	ND	ND	ND	2.1
methoxychlor	39	126	ND	52	14	ND	ND	<10
gamma-chlordane	ND	ND	ND	29	ND	ND	ND	0.54
chromium**	101	31.7	17.4	198	37.4	71	3.4	10 or SB
lead**	607	154	81.3	1620	122	216	2.1	SB

* from MW #6D soils
** units are mg/Kg
ND=Non Detect
MDL = Minimum Detection Limit
SB = Site Background

Table 5-5 Background Conditions in Upgradient Monitoring Wells 1 and 6, Shallow and Deep

Analyte	MW 1S		MW 1D		MW 6S		MW 6D		1992 NYSDEC
	1st Round	2nd Rounc	1st Round	2nd Round	1st Round	2nd Round	1st Round	2nd Round	MCL
bis(2-ethylhexyl)phthalate	ND	ND	8	65	6	ND	5	ND	50
chromium	11	353	132	19.7	13	54.4	33	45.6	50
lead	22	87	29.4	17.2	18.2	29.4	10.5	25.2	25

units are in µg/Kg
ND = Non Detect

Table 5-6 Concentrations in Downgradient Monitoring Wells 2, 3, 4, 5S, 5D, 7S and 7D

Analyte	MW 2		MW 3		MW 4		MW 5S		1992 NYSDEC MCL
	1st Round	2nd Round	1st Round	2nd Round	1st Round	2nd Round	1st Round	2nd Round	
bis(2-ethylhexyl)phthalate	ND	ND/ND	ND	ND/ND	19	66/57	65	53	50µg/L
chromium	317	1440	227	1150	14	15.5	137	131	50µg/L
lead	74.7	240	30.2	71.5	ND	10.2	44.4	33.6	25µg/L

	MW 5D		MW 7S		MW 7D		
	1st Round	2nd Round	1st Round	2nd Round	1st Round	2nd Round	
bis(2-ethylhexyl)phthalate	30	ND	17	100/160	17	62	50
chromium	48	101	33	19.6	18	47.2	50
lead	31.4	40.4	27.9	27	27.9	25.8	25

units are in µg/Kg - ppb
ND = Non Detect
1st Round = 4/92
2nd Round = 11/92

ROSENMAN & COLIN

575 MADISON AVENUE, NEW YORK, NY 10022-2585

TELEPHONE (212) 940-8800
CABLE ROCOKAY NEWYORK
TELECOPIER (212) 940-8776
(212) 935-0670
TELEX 427571 ROSCOL (ITT)
971520 RCFLC NYK (W U)

SAMUEL I. ROSENMAN (1896-1973)
RALPH F. COLIN (1900-1985)

WASHINGTON OFFICE
1300 19TH STREET, N. W.
WASHINGTON, D. C. 20036
TELEPHONE (202) 463-7177

WRITER'S DIRECT DIAL NUMBER
212-940-7065

August 29, 1994

Via Telecopier and Regular Mail

Marsden Chan, Section Chief
New York State Department of Environmental Conservation
Federal Project Section
50 Wolf Road
Albany, NY 12233-7010

Thomas Taccone, Project Manager
U.S. Environmental Protection Agency, Region II
26 Federal Plaza
New York, New York 10278-0012

Re: Anchor Chemical Superfund Site

Gentlemen:

Attached is a memorandum prepared by Anson Environmental Ltd. setting forth the technical basis for our request for no further action in connection with Tank 14.

As you are aware, this is the second time that our client has been asked to collect samples from beneath the building at the site. The first time, protocol as stipulated in the EPA approved Project Operations Plan was closely followed. Despite this fact, further sampling has been requested which will result in the disruption of tenant operations within the building and the expenditure of additional funds by our client.

Since the conditions at the site prevent the migration of 2-butoxyethanol and because its detection at low levels would not ultimately require any cleanup, we ask that you grant the request for no further sampling.

Thank you for your courtesies in this matter.

Very truly yours,

Helen Collier Mauch

Enclosure
cc: Jerry Spiegel Associates(W/enc.)

302808

ANSON ENVIRONMENTAL LTD.

33 Gerard Street • Suite 100
Huntington, New York 11743
516•351•3555
Fax 516•351•3615

August 29, 1994

To: Richard Leland, Esq.
Rosenman & Colin

From: Dean Anson II
Anson Environmental Ltd.

Re: Tank Investigation
Anchor Chemical Site
500 West John Street, Hicksville, NY

It is our understanding that the agencies' concern is that the detection of 2-butoxyethanol in indoor borings 1 and 2 at the Anchor Chemical site indicates a possible release from Tank 14. However, when all of the data are considered, as explained in more detail below, it is our opinion that no further sampling is warranted.

The detection of 2-butoxyethanol in indoor borings 1 and 2 has prompted the request for additional soil samples downgradient within 1 to 5 feet of the southwestern and southeastern corners of the tank. The 2-butoxyethanol is also known as ethylene glycol monobutyl ether. It was detected as a volatile organic and semi-volatile organic as a tentatively identified compound (based upon a laboratory library search) as it is not on the Target Compound List. The compound was detected in the soil sample directly below the tank area at a maximum depth of 17 feet below the surface in indoor boring #2. This sample was collected approximately 20 feet from the southeastern corner of Tank 14, which was known to have contained this compound.

The sample taken by the USEPA oversight contractor at 49-51 feet below the surface (just above the groundwater interface) did not detect 2-butoxyethanol in boring #2. The conditions at the site indicate that the migration of constituents to the groundwater interface at 49-51 feet would be vertical. Therefore, the absence of 2-butoxyethanol at the groundwater interface and the lack of exposure to natural forces such as rainwater, indicates the compound is restricted to an area well above the

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groundwater interface. Moreover, the low solubility (in water) of 2-butoxyethanol, the sandy/gravely soil and the absence of any hydraulic force supports this conclusion.

In the first round of groundwater samples collected in April, 1992, 2-butoxyethanol was not detected in any of the monitoring wells. In the November, 1992 sampling (with reduced detection limits required by the USEPA), the compound was detected at an estimated level of 8 µg/L in monitoring well #7S.

The NYSDEC TAGM does not list a specific groundwater cleanup level for this compound; however, 50 µg/L is the limit for unspecified organic compounds. Therefore, the estimated value of 8 µg/L in MW#7S is significantly lower than the cleanup standard for volatile compounds.

The soil cleanup standard would be 1 mg/Kg for 2-butoxyethanol as the conservative calculation is 20 times the groundwater standard. In indoor boring #1, the levels of 2-butoxyethanol detected as a volatile organic compound were estimated at .030 mg/Kg and .060 mg/Kg at 10-12 feet and 15-17 feet respectively. The estimated level of 2-butoxyethanol detected as a volatile compound in indoor boring #2 was .100 mg/Kg, .200 mg/Kg, and .100 mg/Kg at 5-7 feet, 10-12 feet and 15-17 feet respectively. These levels are well below the soil cleanup standard for 2-butoxyethanol as a volatile organic compound. As a semi-volatile compound, the estimated levels of detection for 2-butoxyethanol were 6.400 mg/Kg at 10-12 feet and 2.100 mg/Kg at 15-17 feet. Since the levels of 2-butoxyethanol as a volatile organic compound would not require any cleanup, additional sampling is not warranted.

The issue of whether 1,4 dioxane and 2-butoxyethanol are breakdown products of each other should be addressed since it is our understanding that the presence of 1,4 dioxane in MW-3 is one basis for the request that additional soil samples be conducted. In fact, the two compounds have similar chemical formulas as they are both glycol ethers. The compound 1,4-dioxane is characterized as $C_4H_8O_2$ and 2-butoxyethanol is $C_6H_{12}O_2$. However, the chemical structure of these compounds is significantly different; that is, 1,4-dioxane has a ring or cyclic structure and 2-butoxyethanol has a straight chain structure. A significant amount of energy (heat) is necessary to make the changes necessary to open the ring

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In the environment present at the site (storage tanks abandoned since 1983 under a 6-inch concrete floor through which percolation is highly improbable), it is highly unlikely that the conditions are present to effect the chemical changes necessary to go from 1,4-dioxane to 2-butoxyethanol or vice versa. The necessary chemical changes would not be a degradation or breakdown but instead a synthesis requiring at least heat and oxygen, the former of which is not present to drive this chemical reaction.

It is important to keep in mind that 1,4 dioxane was detected in the groundwater at a level of 110 parts per billion in one well (MW-3) in one sampling (April, 1992). It was not detected at the lower detection limits in any of the monitoring wells in the second round of sampling in November, 1992. The presence of 1,4 dioxane in one sampling event, and the tenous relationship with 2-butoxyethanol, absent significant energy, is not a sufficient basis for requesting additional soil sampling beneath the tank.

It is our opinion that the following facts and data support a finding of no further investigation with respect to Tank14:

1. Tank 14 passed the tightness test in 1981, has been out of use since 1983, and was found to be filled with concrete by Enro-Serve in June, 1991.

2. 2-butoxyethanol is confined to a resticted area which poses no risk to human health or the environment. It was not detected in the soil at the groundwater interface under the tank area and is not exposed to any hydraulic forces which would cause its migration.

3. The levels of 2-butoxyethanol found in IB #1 and IB #2 are well below the action levels for volatile organic compounds.

4. Indoor borings #1 and #2 are sufficiently close to Tank 14 to provide a meaningful indication of the level of 2-butoxyethanol present.

5. 2-butoxyethanol was detected at a low level, nearly equivalent to the groundwater standard in only one downgradient well during

one sampling event.

6. 1,4-dioxane is not a breakdown product of 2-butoxyethanol.

7. Even assuming that 1,4-dioxane is a breakdown product of 2-butoxyethanol, its detection in one sampling event, subsequent to which its presence was not detected, does not justify concern.

(JJPP)

SEP 30 1994

K.B. Company
c/o Jerry Speigel Associates
375 North Broadway
Gericho, New York 11753

Attention: Arthur D. Sanders,
President

Dean Anson
Anson Environmental
33 Gerard Street
Huntington, NY 11743

Richard G. Leland, Esq.
Rosenman and Colin
575 Madison Avenue
New York, New York 10022-2585

S. Sucharski
Blasland, Bouck and Lee
1 Suffolk Square
Suite 210
Islandia, NY 11787

Re: Anchor Chemical Superfund Site; EPA Comments on the Revised Draft Remedial Investigation Report

Dear Sirs:

The U.S. Environmental Protection Agency ("EPA") has completed its review of the proposed revisions to the draft Remedial Investigation ("RI") report, dated September 1993, for the Anchor Chemical Superfund Site. These revisions were submitted on August 3, 1994 and were in response to EPA's May 6, 1994 letter, which commented on the draft report. The comments below are numbered to correspond to the comments in EPA's May 6, 1994 letter.

Section 3.2 Contaminant Transport

Comment 11. The response indicates that Figure 3-5 identifies the cesspool locations at the Site. However, a copy of the figure was not included with the response. The figure should show the locations of both the cesspool and drywell samples and be included in your response to this letter.

Figure 3-3B needs to be labeled as "Figure 3-3B."

Section 3.3 Geological Investigation

Comment 12. Please revise Table 3-3 to reference the development dates for wells 1S, 2 and 3. The specific days the wells were developed should be referenced.

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SYMBOL --->	WNYS2	WNYS2	NYCSB2					
SURNAME -->	Taccone	Lynch	Petersen					
DATE ----->	Tacc 9/21/94	9/29/94						

Section 4.0 General

New comment 1. The response included the tables requested. However, the report needs to be revised to reference the tables and the MCLs as ARARs for the site. Also, the report should be revised to eliminate any comparison of groundwater MCLs to soil sample data.

Comment 15. The proposed revision to Section 4 is incorrect. All of the April 1992 data for monitoring wells 1S, 4, 6S and 6D should not be disregarded because the result for lead was rejected. Only the sample result for lead is in question. Further, the proposed table should not indicate that lead was not detected in the April 1992 sample, but that the result is unreliable ("R") due to the presence of lead in the blank samples.

Include drywells 2, 3 and 6 in the proposed table on page 6 of the response, which attempts to relate the detected concentrations of lead and chromium in the monitoring wells with the concentrations detected in the drywells. The response also refers to "other factors" which may have caused the lead and chromium concentrations to be in the groundwater. The discussion should explain how the drywell sample results relate to the groundwater sample results and the "other factors."

Section 4.1 Drywell, Drain and Cesspool Analysis

New comment 2. The reported concentrations of methylene chloride in drywells 2 and 3 were 2,100 ppb and 1,100 ppb. The trip blank for these samples had a methylene chloride concentration of 3 ppb. The reported result for toluene in drywell 3 was 1,100 ppb, while the trip blank had a concentration of 1 ppb. As explained in my letter of August 5, 1993, because the trip sample concentrations are less than ten times the sample results for methylene chloride and toluene, no data qualifier is needed.

Comment 18. The response only indicates that Section 4.1 will be revised to reference the data from wells 6S and 6D. Please submit the proposed language for review.

Comment 19. Page 9 of the response: Change "MCL" to "New York State clean up objectives." Also, the results of the cesspool samples should be discussed in Section 4.1. Further, the response only mentions that the cesspool samples do not exceed New York State standards for volatile organic compounds ("VOCs"). The samples were also analyzed for Semi-VOCs, metals, pesticides, PCBs and inorganics, and these results also should be mentioned.

Section 4.2 Tank investigation and Soil Borings Inside the Building

New comment 3. The response indicated that 2-butoxyethanol was not detected as semi-volatile in the samples for indoor boring 1. However, the compound was detected as a semi-volatile at indoor boring 2 at 6.4 ppm (10'-12') and 2.1 ppm (15'-17').

On September 7, 1994, Tom Taccone, of EPA, Jon Greco and Marsden Chen, of NYSDEC, and Helen Mauch and Dean Anson, for Respondent, participated in a conference call concerning the additional soil and groundwater samples, which were directed in EPA's letter of May 6, 1994. Mr. Taccone indicated that EPA and NYSDEC had reviewed Helen Mauch's August 29, 1994 letter and the attached memorandum from Dean Anson, which were offered to support its request that EPA reconsider the additional sampling requirement. Mr. Taccone explained that EPA, with input from NYSDEC, decided to maintain its position that additional soil and ground water samples are necessary. EPA disagrees with Anson Environmental's conclusion that the sample results from indoor borings 1 and 2 are close enough to tank 14 to provide an adequate assessment of any contamination which may exist around or under the tank.

EPA and NYSDEC recognize the space constraints imposed by the physical layout of the room where tank 14 is located. The additional indoor soil borings would not be easily obtained, and we understand that sampling may potentially impact the building tenant. Therefore, during the conference call, Mr. Chen proposed, and EPA concurs, that three soil borings may be taken outside the building. Two borings will be advanced vertically. For each vertical boring, soil samples will be collected in accordance with the April 10, 1991, Project Operations Plan for the RI/FS, to a depth of 35 feet. If elevated OVA readings (above background) are not found, the boring can be terminated. If an elevated OVA reading is found, then the boring should be advanced to the water table. The third boring will be advanced at an angle so that a soil sample can be collected at a depth of 17 feet directly under tank 14.

Comment 20. EPA maintains its comment. Revise the report to reference bis(2-ethylhexyl) phthalate as a site contaminant.

Comment 21. Paragraph three of the response indicates that the samples "were re-analyzed." Was this re-analysis the actual headspace analysis, which was preceded by the OVA probe, which was passed over the sample when the split spoon was first opened? Please revise the discussion to clearly describe all OVA sample analyses.

Section 4.3 Monitoring Well Installation and Sampling and Analysis - 2 Rounds

Comment 22. EPA maintains its original comment. Revise the report to indicate that acetone, methylene chloride, and bis(2-ethylhexyl) phthlate are site contaminants.

New comment 6. Response does not address EPA's comment. Monitoring wells 2, 3, and 5S need to be sampled. The groundwater samples should be taken at the same time the soil samples are taken.

Section 5.2.1 Contaminant Persistence in Vadose Zone

Comment 40. Response did not address EPA comment. Please do not use data from any downgradient wells or any other off-site data. Only the soil sample data from the installation of wells 6S and 6D should be used.

Drywells, Drain, and Cesspool Sediments

Comment 42. The response only indicates that references to natural attenuation will be eliminated. The proposed language should be submitted for review.

Section 5.3.2 Saturated Zone

Comment 44. Response only indicates that sample results from monitoring wells 6S and 6D will be used. The proposed discussion was not included which compares the site well data with upgradient wells 6S and 6D. Please submit the proposed language for review.

Please respond to the above comments within 20 days of your receipt of this letter. If the response adequately addresses EPA's comments, you will be asked to submit a revised draft report. Within 5 days of your receipt of this letter, please provide Mr. Taccone with a proposed date for the additional soil and groundwater samples, and a figure which proposes the locations for the three outside soil borings.

A satisfactory and timely response to this letter is required under the provisions of the Administrative Order on Consent, Index Number II CERCLA-90208. Specifically, paragraphs 29 and 30 of the Order require you to amend the draft RI in accordance with EPA's comments on the draft and, if necessary, perform any additional investigatory work. This letter constitutes EPA's

third set of comments on the draft RI report and second request for additional soil and groundwater sample data. An unsatisfactory response to this letter may prompt EPA to complete the report and seek any appropriate penalties as stipulated in the Order.

Any questions on this matter should be directed to Mr. Taccone at (212) 264-9128.

Sincerely yours,

Carole Petersen, Chief
NY/Caribbean Superfund Branch II

cc: J. Greco, NYSDEC
S. Boone, CDM
J. O'Brien, Esq.

ANSON
ENVIRONMENTAL LTD.

33 Gerard Street • Suite 100
Huntington, New York 11743
516•351•3555
Fax 516•351•3615

October 4, 1994

Tom Taccone
New York/Caribbean Compliance Branch
U.S. Environmental Protection Agency
26 Federal Plaza, Room 747
New York, New York 10278

Re: Monthly Report for September, 1994
Anchor Chemical Superfund Site
Administrative Order No. II CERCLA-90208

Dear Mr. Taccone,

In accordance with the above referenced Administrative Order, Anson Environmental Ltd. and Blasland Bouck & Lee (BB&L), are submitting this monthly progress report on activities conducted at the Anchor Chemical Site in Hicksville, New York during the month of September.

Responses to the comments on the RI were submitted to your office. Several discussions were held with your office and the NYSDEC officials. The response from the USEPA was received today and we are preparing the necessary information and timetable for the additional work to be conducted on the site.

Efforts to keep this project moving forward are the goals of Anson Environmental and BB&L.

Very truly yours,

Dean Anson

Dean Anson II
Co-Facility Coordinator

cc: M. Chen, NYSDEC (Albany)
A. Shah, NYSDEC (Stony Brook)
F. Werfel, Spiegel Associates
A. Sanders, Spiegel Associates
R. Leland, Esq., Rosenman and Colin
J. Doyle, Esq., USEPA
J. O'Brien, Esq., Anchor Chemical
J. Tillotson, Newsday
J. Greco, NYSDEC (Albany)

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CDM FEDERAL PROGRAMS CORPORATION
a subsidiary of Camp Dresser & McKee Inc.

14 December 1994

Mr. Thomas Taccone
Remedial Project Manager
U.S. Environmental Protection Agency
26 Federal Plaza - Room 737
New York, New York 10278

PROJECT: EPA CONTRACT NO.: 68-W9-0024

DOCUMENT NO.: 7720-070-EP-CCXF

SUBJECT: Evaluation of Additional Proposed Soil Borings Upon Baseline Risk Assessment
Oversight of Expanded Remedial Investigation Activities
Anchor Chemical Site
Hicksville, New York
EPA Work Assignment 070-2PG1

Dear Mr. Taccone:

In response to your request of November 29, 1994, CDM Federal Programs Corporation (CDM Federal) performed a brief review of the existing risk assessment for the site, prepared by an EPA contractor (TRC) in Spring 1994.

The State has requested that additional borings be installed in the UST area within the Anchor Chemical building to search for 2-butoxyethanol. The following is a discussion of the impact additional data from these borings may have on the baseline risk assessment as determined by CDM Federal.

Chemical Characterization

The compound of interest 2-butoxyethanol (synonyms ethylene glycol monobutyl ether and butyl cellosolve) is not an analyte on the Target Compound List (TCL). If additional boring samples are collected from the tank area, an appropriate analytical method for the detection of 2-butoxyethanol would have to be determined.

The compound 2-butoxyethanol was reported to be stored in Tanks #7 and #14. As part of the RI, six indoor borings have been placed in the tank area where tanks containing other volatile compounds were located, such as methylene chloride, acetone, and 1,1,1-trichloroethane. Data from these indoor borings were used in the risk assessment. However, no VOCs were detected in the boring samples collected to a depth of 15 feet.

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2-butoxyethanol as a Contaminant of Concern

The primary health concerns for 2-butoxyethanol are irritation and acute inhalation exposures. This compound is mildly irritating to the skin and may penetrate the skin. Vapor may cause conjunctivitis and upper respiratory irritation. The compound is moderately toxic orally and when inhaled and acute exposure may result in possible effects to the blood, liver, and kidneys. There is currently no EPA oral reference dose for use in quantitative risk assessment. However, EPA has established a chronic inhalation reference concentration of 0.02 mg/m^3 and a subchronic reference concentration of 0.2 mg/m^3. The NIOSH time-weighted-average exposure limit is 120 mg/m^3.

Potential Exposure Pathways and Associated Risks

Currently there is no potential exposure pathway for contamination associated with the tanks, since the tanks are below ground surface. The immediate area surrounding the site is zoned for light industry with the closest residential area a quarter mile from the site. As stated on page 4-8 of TRC's Final Risk Assessment the "likely receptors under the future scenario include utility workers (telephone, water, electricity, sewer) who could be exposed to subsurface contaminants during excavation activities." Exposure to excavation workers to subsurface soils by ingestion and dermal contact were evaluated by TRC. Exposure to future excavation workers via the inhalation of contaminants in surface and subsurface soils was considered by TRC to be minimal due to the short duration of exposure. The risks calculated for the ingestion of and dermal contact with subsurface soils and sediments for a future excavation worker were $3x10^{-7}$ and the hazard index was 0.4.

The potential receptors and exposure pathways to any possible contamination associated with the 2-butoxyethanol tanks would be the same as those evaluated in TRC's risk assessment (i.e., future excavation workers exposed through ingestion, dermal contact, and inhalation). If additional soil boring samples were collected and analyzed for 2-butoxyethanol, ingestion and dermal risks could not be quantitatively evaluated since there is no EPA oral reference dose. Inhalation risks could only be evaluated if a model was developed to estimate potential air concentrations that would be released from contaminated soils. Any future excavation activities in the tank area are likely to be conducted under proper health and safety conditions that would minimize direct contact and monitor breathing zone air.

Please contact me at (908) 757-9500 if you have any questions.

Very truly yours,

CDM FEDERAL PROGRAMS CORPORATION

Susan E. Boone

Susan E. Boone
Work Assignment Manager

Attachment

cc: K. Kollar, EPA ARCS II Project Officer
A. Devine, EPA
R. Goltz, P.E., ARCS II Program Manager
P. Boyle, ARCS II Technical Operations Manager
D. Listernick, CDM Federal
Document Control, CDM Federal (2 copies)
NWJY Project File

ANSON
ENVIRONMENTAL LTD.

33 Gerard Street • Suite 100
Huntington, New York 11743
516•351•3555
Fax 516•351•3615

December 28, 1994

Thomas Taccone
US Environmental Protection Agency
Region II
Jacob K. Javits Federal Building
26 Federal Plaza, Room 747
New York, New York 10278-0012

Re: Responses to EPA September 30, 1994 Comments on
Revised Remedial Investigation Report
Anchor Chemical Site
Administrative Order No. II CERCLA-90208

Dear Mr. Taccone,

We have carefully reviewed your comments regarding the Remedial Investigation (RI) Report. The responses to your comments are numbered to correspond to the comments in the prior letter.

Section 3.2 Contaminant Transport

Comment 11. Figure 3-5 is attached and shows the location of the cesspool samples and the drywell samples.

Figure 3-3B, which is correctly labelled, is also attached to this response.

Section 3.3 Geological Investigation

Comment 12. Specific dates for initial well development by Lockwood, Kessler and Bartlett in 1982 are unavailable. A search of the field notes and reports did not reveal the actual 1982 well development date. The wells installed during 1991 were developed on the dates listed in the chart.

All groundwater monitoring wells were purged prior to sampling in accordance with the Project Operations Plan. The revised table (Table 3-3) is attached.

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Section 4.0 General

New comment 1. Section 4.0 will be revised to reflect the MCLs as ARARs for the Site. Any comparison of groundwater MCLs to soils data has been eliminated.

Comment 15. The final RI report will contain the following language: Elevated levels of chromium and lead were detected in the groundwater samples collected in November 1992. The concentrations detected in both samplings are summarized below:

	1992 Chromium (in ppm)		1992 Lead (in ppm)	
Monitoring Well	April	November	April	November
Shallow Wells				
MW-1S	11*	353	22.0R	87.0*
MW-2	317*	1440	74.7*	240*
MW-3	227*	1150	30.2*	71.5*
MW-4	14*	15.5*	15.6R	10.2*
MW-5S	137*	131	44.4*	33.6*
MW-6S background	**13***	**54.4**	**18.2R**	**29.4***
MW-7S	33*	19.6*	27.9*	27.0*
Deep Wells				
MW-1D	132*	19.7*	29.4	17.2*
MW-5D	48*	101	31.4*	40.4*
MW-6D background	**33***	**45.6**	**10.5R**	**25.2***
MW-7D	18*	47.2	27.9*	25.8*

*estimated value per data validation
R = unreliable result-this compound may or may not be present

Because of the data validator's comments regarding the metals in groundwater in the April 1992 sampling, the use of the data for MW-6S and MW-6D is not appropriate. The data from the November 1992 sampling represents the levels of inorganic compounds on the site.

Elevated levels of lead and chromium in the groundwater in monitoring wells 1S,1D, 2, 3, 4, and 5S were identified in the November 1992 sampling. These levels may be due to the presence of these metals in the drywells in close proximity to the following wells:

Monitoring Well	Drywell	Concentration of Chromium (Cr) and Lead (Pb) in Drywell	
MW-1S and MW-1D	DW-4	Cr = 31.7 ppm	Pb = 154 ppm
MW-2	DW-8	Cr = 198 ppm	Pb = 1620 ppm
MW-3 and MW-4	DW-7	Cr = 54.2 ppm	Pb = 157 ppm
MW-5S	Drain	Cr = 71.0 ppm	Pb = 216 ppm
	DW-6	Cr = 240 ppm	Pb = 1120 ppm
	DW-2	Cr = 463 ppm	Pb = 1210 ppm
	DW-3	Cr = 101 ppm	Pb = 607 ppm

The concentrations in each of these drywells or drain exceed site background levels of 3.4 parts per million (ppm) for chromium and 2.1 ppm for lead. Site background was derived from soil sampling at MW-6D 60-62' (see Table 4-3).

Section 4.1 Drywell, Drain and Cesspool Analysis
New comment 2.

The data validator, Environmental Standards Inc., commented on the elevated levels of methylene chloride and toluene in drywells 2 and 3. ESI stated that the large dilution factor during laboratory analysis led to the disparity between the levels reported in the blanks and the levels reported in drywells 2 and 3.

Although we understand EPA's formula for evaluating whether a data qualifier is necessary, we believe that the anticipated remediation of the drywells, the lack of a source of methylene chloride in the drywell sediment for these two drywells, and the validator's analysis, support our view that it is not necessary to characterize methylene chloride and toluene as site contaminants at this time.

We have attached a copy of the actual report page from Environmental Standards Inc.

Comment 18. The revised section reads as follows:

4.1 Drywell, Drain and Cesspool Sample Analyses

As described in Section 3 of this report, nine drywells, one drain and two

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abandoned cesspools were sampled (see Figure 3-2). The drywell and drain samples were collected from the sediment in the bottom of the structures. The results of this sediment sampling are discussed by category of compound and sampling location.

ESI-validated laboratory data for samples collected from Drywells 1, 5 and the drain did not have any volatile compounds above the method detection limits.

Drywells 2, 4, 6, 7, 8 and 9 had volatile organic compounds identified above the method detection limit. The compounds present in Drywell 2 are listed in Table 4-1. Drywells 4, 6 and 8 contained concentrations of toluene at 64 (estimated), 5 (estimated) and 200 ppb, respectively. Drywells 7 and 9 had carbon disulfide at 5 ppb (estimated) and 21 ppb, respectively.

Drywells 2, 4, 5, 8, 9 and the drain had semi-volatile organic compounds present above the method detection limit. Phenanthrene was detected in Drywell 2 (370 and 370 ppb), Drywell 4 (260 and 310 ppb), Drywell 8 (1,300 and 1,500 ppb), Drywell 9 (260 ppb) and the drain (190 ppb). Semi-volatile compounds present in each of the drywells are identified in Table 4-2 and inorganic analytes present are identified in Table 4-3.

The only semi-volatile organic compound present in Drywell 5 was benzoic acid (53 and 73 ppb). The laboratory analyzed the sample from Drywell 5 twice for quality assurance/quality control purposes.

All of the drywells and the drain contained bis(2-ethylhexyl)phthlate above method detection limits. According to Laboratory Resources, Inc., the parent organization of Intech Biolabs Laboratories, Inc., bis(2-ethylhexyl)phthlate is considered a laboratory contaminant (see Appendix K). Intech Biolabs performed the analysis for semi-volatile organic compounds, as well as the volatile organic compounds, pesticides and PCBs.

The following metals were identified in all of the nine drywells and the drain: aluminum, arsenic, barium, calcium, chromium, copper, iron, lead, magnesium, manganese, nickel, potassium, sodium, vanadium and zinc.

No aroclors (PCBs) were detected above the method detection limits in any

drywell samples.

Pesticides were detected in Drywells 2, 3, 4, 6, 7, 8 and 9 (see Table 4-4). Drywells 1 and 5 and the drain did not have any pesticides detected above the method detection limits. The sediment/soil in drywell 2 contained the following five pesticides: alpha BHC, dieldrin, 4,4'-DDE, endrin and methoxyclor.

The two cesspools, which were abandoned and filled with sand in 1982, were sampled below the fill material. The second round of sampling was taken September 20, 1993. The samples were collected at 11-13' for Cesspool #1 and 12-14' for Cesspool #2. Field and trip blanks were also submitted for analysis.

The only volatile compound detected was methylene chloride in cesspool #1 at an estimated value of 10 ppb, which was determined by the data validator to be considered non-detected. The validator also determined that the bis(2-ethylhexyl)phthlate at levels of 190 and 140 ppb respectively should be considered a laboratory/field contaminant.

The pesticide, dieldrin, was detected at 3.4 and 7.5 ppb in cesspools #1 and #2 respectively and methyoxyclor was detected in cesspool #2 at an estimated level of 14 ppb. There were no aroclors (PCBs) detected in either sample.

The levels of inorganic analytes detected in the cesspool samples have been added to Table 4-3. The levels detected are generally below those of the drywell sediment samples and do not, in and of themselves, represent any contamination. The compounds of primary interest, lead and chromium, were detected at levels of 1.9 ppm in both cesspools for lead and 4.3 and 3.5 ppm for chromium. The site background level in monitoring well 6D installation was 2.1 ppm for lead and 3.4 ppm for chromium. The NYSDEC soil cleanup objectives are 30 ppm for lead and 10 ppm for chromium. These samples are well below the cleanup objectives.

In general, as one would expect intuitively, the levels of compounds detected in the surface sediment of the drywells and the drain were higher than the soil sampled from the installation of monitoring well #6D whose samples were collected from 60-62 feet below the surface. The three tables included (5-1, 5-4, 5-4a) summarize the comparison of

drywell sediment to soil from the groundwater interface of an upgradient monitoring well.

(We understand that EPA requested soil sample data from the installation of monitoring well 6S. There were no soil samples taken during the installation of that well. The data sheets prepared by ESI indicate a sample MW-6S at 74-76'. These samples were actually collected from the other well in the cluster, MW-6D at 74-76'. The data is comparable and the 60-62' sample is the one included on the revised charts.)

Comment 19. The general discussion of cesspool sampling was prepared and included in the revised 4.1 response for Comment 18.

Section 4.2 Tank Investigation and Soil Borings Inside the Building
New comment. We concur with the sampling plan for three outdoor borings, two vertical and one angle. We recommend the submission of the following samples to the laboratories for analysis if the headspace OVA readings do not indicate elevated levels of volatile organic compounds:
Boring #1 28-30' and 33-35'
Boring #2 28-30' and 33-35'
Angled boring (as specified by USEPA) 17' under Tank 14.

If elevated readings are found, the samples which displayed the elevated readings and the groundwater interface samples will be submitted to the laboratories.

The samples will be analyzed for the Target Compound List volatile organic compounds, semi-volatile compounds, 1,4 dioxane and 2-butyoxyethanol in the CLP data package format.

Comment 20. Contrary to the EPA's statement that bis (2-ethylhexyl)phthlate should be considered a site contaminant, the data validator specifically stated that ..."this compound is an extremely common field and laboratory contaminant. If these results are to be used in the decision-making process (i.e. risk assessment), caution should be used." This information was included in the data qualifier information for the analysis of indoor borings #1 and #2.

Moreover, since this compound is included on the list for which the next round of soil and water samples will be analyzed, any further discussion

of this issue should await those results.

Comment 21. The sample selection process can be described briefly as the following -as each split spoon was removed from the ground, the split spoon was opened by the hydrogeologist and oversight contractor. The description of the soil sample was recorded. The sample was probed and scanned using an organic vapor meter supplied by the consultant and the oversight contractor. The readings were recorded and the sample was put into the appropriate glassware for the Target Compound List analysis. The jar which was to be submitted for analysis for metals was covered with a piece of aluminum foil and capped. This jar was set aside for head space analysis which was to take place in the field.

As part of the selection process, each sample was examined visually to identify anomalous or unusual features (e.g. color or texture) that might warrant its submission for laboratory analysis.

Split spoon samples were collected at five foot intervals to the groundwater interface which was at 60-62 feet below ground surface. After the completion of the boring, the samples were scanned with the OVA or HNu to conduct the headspace analysis. The head space analysis consisted of removing the lid from the 8 oz. jars which had been filled previously and sealed with aluminum foil. The foil was punctured and the tip of the OVM or HNu was placed in the punctured hole immediately. The readings were taken and recorded. In the cases where the head space readings did not show significant levels above background, the groundwater interface samples were chosen.

Generally, the two samples with the highest head space readings were chosen for laboratory analysis unless there were other, field-related circumstances (color or texture), which required an additional sample to be submitted to the laboratory.

The sample selection process did not rely on only one selection criterion (e.g. OVM or HNu readings). In every case, the oversight contractor was consulted prior to selecting the samples for laboratory analysis.

Section 4.3 Monitoring Well Installation and Sampling and Anaylsis-2 Rounds

Comment 22. AEL maintains its comment as expanded in Section 4.1,

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Comment 2.

New comment 6. Groundwater samples will be taken for monitoring wells 2, 3, and 5S as suggested by the USEPA. The samples will be submitted for analysis for the Target Compound List volatile organic compounds, semi-volatile compounds, 1,4 dioxane and 2-butyoxyethanol in the CLP data package format. The groundwater sampling work will be scheduled, as you requested, with the soil borings.

Section 5.2.1 Contaminant Persistence in Vadose Zone

Comment 40. The new section reads as follows:

The concentrations of metal occurring in the soil sampled during the installation of groundwater monitoring well #6D at 60-62 feet represents the background soil levels. The levels are as follows as measured in mg/Kg:

Aluminum	811
Arsenic	0.80
Barium	2.7 U
Beryllium	0.77 U
Cadmium	ND
Chromium	3.4
Copper	2.3 U
Iron	1960
Magnesium	28.5
Manganese	25.4
Vanadium	2.3 U
Zinc	2.4 U

According to Environmental Standards (data validator):
U = this analyte should be considered "not-detected" since it was detected in a blank at a similar level.

Soils Under the Building

This paragraph will remain as originally written.

Comment 42 addresses the next paragraph in Section 5.2.1.

Drywells, Drain, and Cesspool Sediments

Comment 42. The new section reads as follows:

The chemical compounds identified in the sediment in the drywells and

drain will be addressed in a plan specified by NYSDEC in concurrence with the USEPA. This plan will be implemented at a future date, scheduled with the concurrence of the USEPA. The quality of the soil beneath the drywell and drain sediment will be substantiated by endpoint sampling.

The laboratory data for the cesspool sampling suggests that there is no contamination present below the cesspools.

The next paragraph was amended in the September comments to read as follows:
The second round of sampling indicates that there is no contamination present in the vicinity of the former cesspools. We believe that the cesspools do not represent a source of contamination as they were properly abandoned in 1980 following Nassau County protocol. They have not been used since 1980 when the facility was connected to the sanitary sewer system of the Nassau County Department of Public Works.

Section 5.3.2 Saturated Zone
Comment 44. Section 5.2.2 has been re-written as follows:
Contaminant Persistence in the Saturated Zone
The laboratory analyses of groundwater samples collected from the Site showed that the concentrations of volatile organic compounds have continued to decline. In addition, the soil samples collected from the saturated zone did not identify the presence of volatile organic compounds.

The levels of inorganics identified in the groundwater are compared to the levels in the soil identified from the samples of the soil taken during the installation of the upgradient well #6D at 74-76 feet. These data indicate that the groundwater samples collected at the site represent levels comparable to the background and are illustrated on the revised Table 4-9.

Since no hazardous materials have been used on Site since Anchor Chemical vacated the building, the volatile organic compounds present in the groundwater should continue to decline and reach background levels.

In Section 5.3 Contaminant Migration, Saturated Zone subsection, paragraph 3 which refers to Table 5-8 will be eliminated.

The attachments to this response include revised Table 3-3, 4-9, 5-1, 5-4, and 5-4a, Figures 3-3B and 3-5 as well as a portion of the ESI commentary on the data qualifiers.

We trust this information is satisfactory for your purposes.

Very truly yours,

Dean Anson

Dean Anson II
Co-Facility Coordinator

cc: Richard Leland, Esq., Rosenman & Colin
Arthur Sanders, Spiegel Associates
Fred Werfel, Spiegel Associates
James Doyle, Esq., USEPA
James O'Brien, Esq., Anchor Chemical
Susan Boone, CDM

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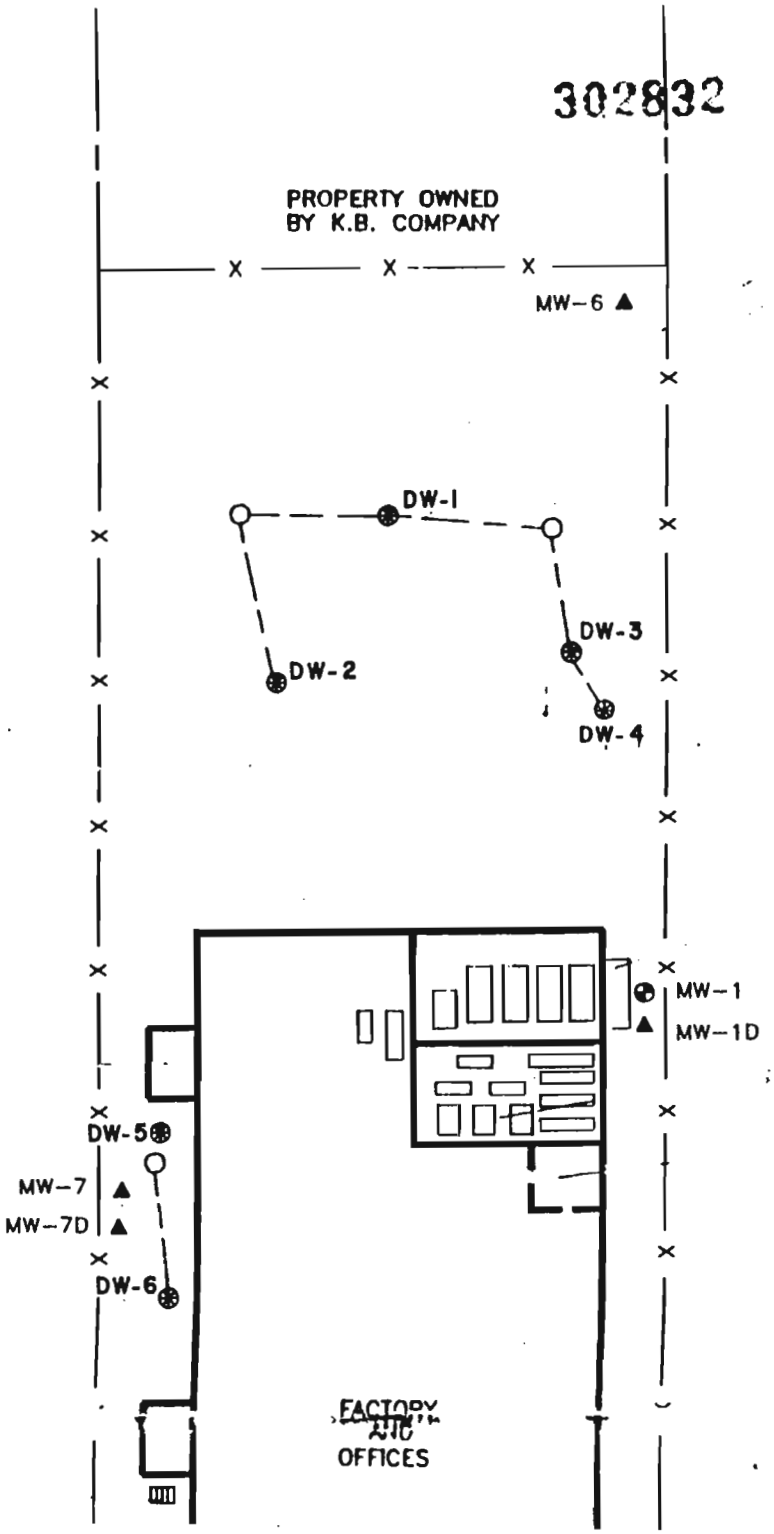

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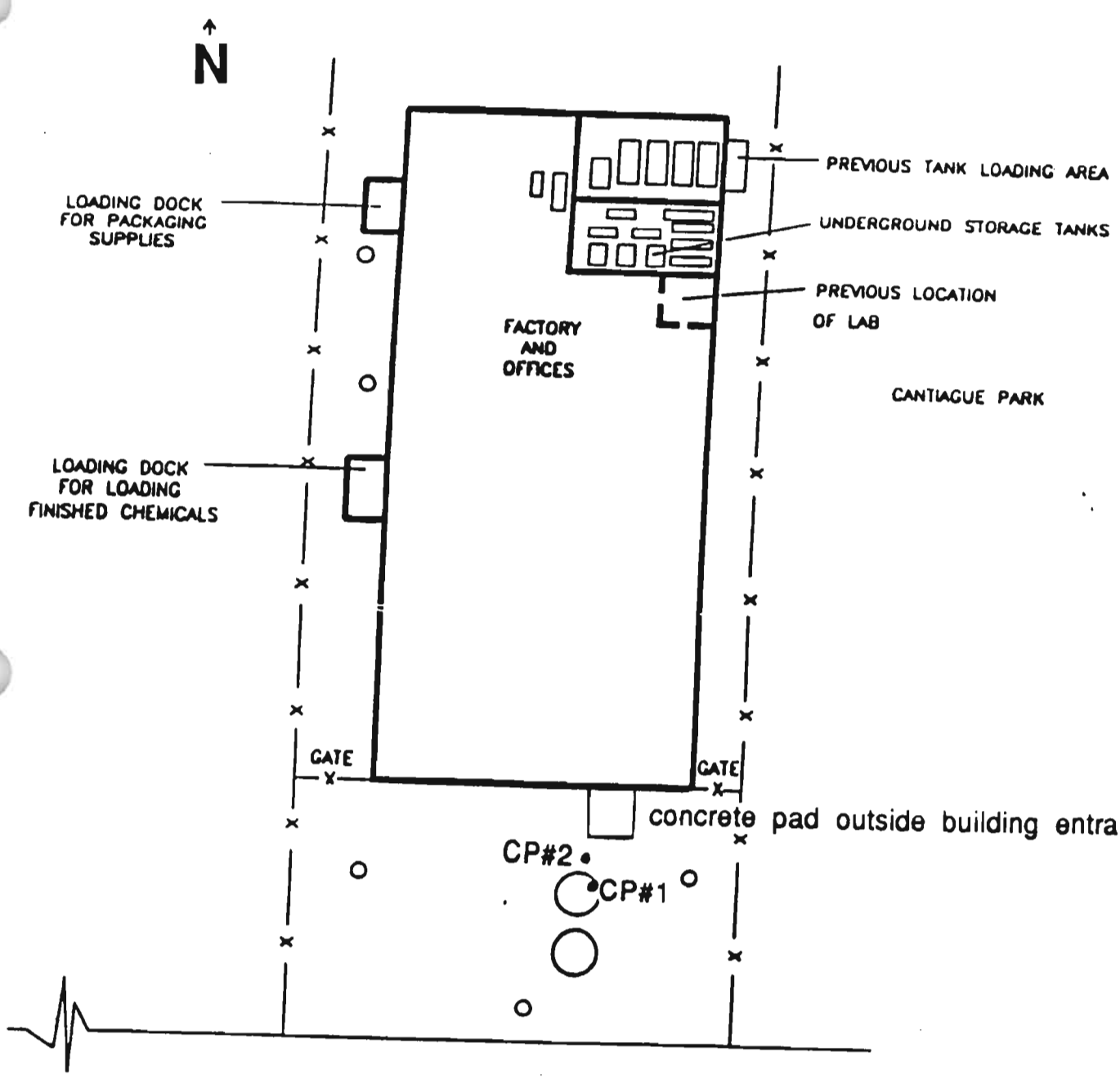

500 West John Street

Cesspool Sampling Locations

CP#1 29' west of east side of bldg
22' south of southern side of bldg

CP#2 31' west of east side of bldg
19' south of southern side of bldg

Figure 3-3 B
Anson Environmental

Anchor Chemical Site
500 West John Street, Hicksville, NY
Table 3-3-Well Development Data

Well #	Installation Date	Development Date	Purge Dates	1st Round Sampling Dat	2nd Round Sampling Dat
1D	11/19/91	3/31/92	4/23/92,11/9/92	4/23/92	11/9/92
1S	12/18/82	unknown(LKB)	4/23/92, 11/10/92	4/23/92	11/10/92
2	12/18/82	unknown(LKB)	4/23/92, 11/10/92	4/23/92	11/10/92
3	12/18/82	unknown (LKB)	4/23/92, 11/10/92	4/23/92	11/10/92
4	11/24/91	12/3/91	4/22/92,11/10/92	4/22/92	11/10/92
5D	3/10/92	3/22/92	4/22/92,11/10/92	4/22/92	11/10/92
5S	3/13/92	3/22/92	4/22/92,11/9/92	4/22/92	11/9/92
6D	3/25/92	3/30/92	4/23/92,11/9/92	4/23/92	11/9/92
6S	11/25/91	12/3/91	4/23/92,11/9/92	4/23/92	11/9/92
7D	3/18/92	3/22/92	4/22/92,11/10/92	4/22/92	11/10/92
7S	3/22/92	3/22/92	4/22/92,11/9/92	4/22/92	11/9/92

2. It should be noted that multiple field blanks were designated "Field Blanks." For the purpose of this report, the reviewer has referred to each as "Field Blanks" with the date the field blank was collected in parentheses to distinguish between the samples.

3. According to the Case Narratives, di-n-butylphthalate was contained in the semivolatile matrix spike solutions and shown on the quantitation report and chromatograms. However, this compound was not reported on either matrix spike/matrix spike duplicate Form I, and di-n-butylphthalate was not observed in the associated chromatograms or quantitation lists.

4. According to the Case Narratives, the concentrations of *trans*-1,3-dichloropropene and *cis*-1,3-dichloropropene are 92 and 106 percent, respectively, of the reported values in the standard solution mix. The reviewer has confirmed this comment by recalculating relative response factors for the compounds and data usability is not affected.

With regard to data usability, the principal areas of concern are blank results and calibrations. Based upon the data packages reviewed, the following organic data qualifiers are offered. It should be noted that the following data usability issues represent an interpretation of the quality control results obtained for the project samples. Quite often, data qualifications address issues relating to the sample matrix problems. Similarly, the validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the following data usability issues should not necessarily be construed as an indication of laboratory performance.

Organic Data Qualifiers

- Due to the presence of acetone and methylene chloride in field blanks, trip blanks and/or laboratory method blanks, the positive results for these compounds in samples IB#1 10-12', IB#1 15-17', IB#2 10-12', IB#2 15-17' and IB#2 5-7' should be considered "not-detected" and have been flagged "U" on the data tables (Section 2, Part A). For results reported at levels less than the CRQL, the result has been replaced with the CRQL with the appropriate "U" qualifier code.

- Although there is no direct reason to qualitatively question the reported results of bis(2-ethylhexyl)phthalate in samples IB#1 10-12' and IB#1 15-17', this compound is an extremely common field and laboratory contaminant. If these results are to be used in the decision-making process (i.e. risk assessment), caution should be used.

- The reported results for bis(2-ethylhexyl)phthalate in samples IB#1 10-12' and IB#1 15-17' should be considered estimated and have been flagged "J" on the data tables. A high percent difference (38.7%) was observed for bis(2-ethylhexyl)phthalate between the

Anchor Chemical Site
500 West John Street
Hicksville, New York

Table 4-9 - Inorganics In Groundwater-Round 2 - November, 1992 (ppb)

Inorganic Analyte		MW 1D	MW 1S	MW 2	MW 3	MW 4	MW 5D	MW 5S	MW 6D	MW 6S	MW 7D	MW 7S	MW6D 74-76' (mg/Kg)	1992 NYSDEC MCL
aluminum	*	314	35100	53100	34300	1690	3320	1710	353	803	675	890	**515**	NS
arsenic			7.2*	9.2	6.4								**0.85**	25
barium	*	39.8	110	230	169	56	79.5	46.6	45.1	75.7		63.8	**2.2U**	1000
cadmium														10
calcium	*	6980	25400	9750	16100	9490	50500	20700	13900	24200	6360	9080	**33.7U**	NS
chromium		19.7*	353	1440	1150	15.5*	101	131	45.6	54.4	47.2	19.6*	**3.7**	50
cobalt			10.5	16.1	20.3									5
copper	*	36.2	169	123	179	26	112	102	33	79.8	36.9	75.1	**2.0 U**	200
iron	*	558	28300	40900	31300	1830	2450	3420	634	1370	1520	1230	**1360**	300
lead	*	17.2	87	240	71.5	10.2	40.4	33.6	25.2	29.4	25.8	27	**1.3**	25
magnesium	*	827	2890	2750	3070	1530	2610	1870	1970	2760	645	1010	**34.6**	35000
manganese		8.2	226	436	482	64.6	68.8	44.4	20.9	58.4	22.7	14.3	**14.8**	300
mercury			0.09	0.17	0.06			0.06						2
nickel			97.4	51.9	64		23.8	63.2	20.9		8.2			5
potassium	*	2540	4510	5860	4920	1930	3500	2150	2270	4620	1010	7050		NS
sodium		21700	39600	52500	24600	6820	27000	2090	11100	10600	2170	4160		NS
vanadium			41.9	72.4	53.2								**2.4 U**	14
zinc	*	67.7	229		73.6	94.4	342	173	94.2	97	154	70.7	**1.7 U**	300
cyanide														100

*estimated in all wells or in well specified
NS = no standard
MCL = maximum contaminant level (ug/L)

Table 5-1 Concentration of Analytes found in Drywell #2 at Various Depths

Analyte (µg/Kg)	Surface	15-17 feet	25-27 feet	Background MW #6D (60-62')
1,1-dichloroethane	1600	ND	ND	ND
1,1,1-trichloroethane	3300	ND	ND	ND
toluene	4800	2300	ND	ND
ethylbenzene	4800	4800	ND	ND
total xylenes	67000	82000	ND	ND
naphthalene	9800/9500	290	ND	ND
2-methylnaphthalene	4100/3900	150	ND	ND
phenanthrene	370/320	58	ND	ND
di-n-butylphthlate	2400/2500	100	ND	ND
fluoranthene	300	69	ND	ND
butylbenzylphthalate	5100/5200	410	ND	ND
bis(2-ethylhexyl)phthalate	25000/27000	ND	ND	36
pyrene	ND	66	ND	ND
4-chloro-3-methylphenol	ND	ND	570	ND
aroclor 1254	ND	230	ND	ND
chromium (mg/Kg)	463	392	32.9	3.4
lead (mg/Kg)	1210	130	4.6	2.1

ND=None Detect

Table 5-4
Concentration of Analytes - Drywells #1, 6 & 7 at Various Depths

	Surface	15-17'	25-27'	Background MW 6D (60-62'
Drywell #1				
bis(2-ethylhexyl)phthalate (µg/kg)	9700/11000	340	340	36
chromium (mg/Kg)	36.1	2.7	4.1	3.4
lead (mg/Kg)	124	1.8	2.5	2.1
Drywell #6	**Surface**	**30-32'**	**35-37'**	**Background**
bis(2-ethylhexyl)phthalate (µg/kg)	26000	ND	ND	36
chromium (mg/Kg)	240	7.6	6.7	3.4
lead (mg/Kg)	1120	6.7	1.8	2.1
Drywell #7	**Surface**	**40-42'**	**45-47'**	**Background**
bis(2-ethylhexyl)phthalate (µg/kg)	ND	ND	ND	36
chromium (mg/Kg)	54.2	ND	ND	3.4
lead (mg/Kg)	157	1.0	0.78	2.1

ND = None Detect

Table 5-4a Concentration of Analytes found in Drywells #3,4,5,8,9 and Drain

Analyte (mg/kg)	DW 3	DW 4	DW 5	DW 8	DW 9	DRAIN	MW #6 (60-62')	ppm Rec. Soil Cleanup Obj.
carbon disulfide	ND	ND	ND	ND	21	ND	ND	2.7
toluene	ND	64	ND	200	ND	ND	ND	1.5
benzoic acid	ND	ND	53/73	ND	ND	ND	ND	2.7
phenanthrene	ND	260/310	ND	1800/1500	260	190	ND	50
anthracene	ND	ND	ND	390	ND	ND	ND	50
di-n-butylphthalate	ND	ND	63/72	ND	ND	480	ND	8.1
fluoranthene	300	700/810	ND	3700/3400	440	410	ND	50
butylbenzylphthalate	1100/1100	ND	64/48	ND	370	300	ND	50
bis(2-ethylhexyl)phthalate	26000/21000	ND	ND	ND	ND	ND	36	50
pyrene	ND	790/860	/34	3700/4500	340	320	ND	50
benzo(b)fluoranthene	ND	1000/1000	ND	2900/2700	ND	ND	ND	1.1
chrysene	ND	520/590	ND	1900/2000	250	230	ND	0.4
benzo(a)anthracene	ND	/490	ND	1600/	ND	ND	ND	0.224 or MDL
benzo(k)fluoranthene	ND	560/500	ND	1700/1700	ND	ND	ND	1.1
benzo(a)pyrene	ND	580/590	ND	1400/1100	ND	ND	ND	.061 or MDL
indeno(1,2,3-cd)pyrene	ND	ND	ND	/1500	ND	ND	ND	3.2
beta-BHC	ND	ND	ND	ND	8.2	ND	ND	0.2
dieldrin	87	16	ND	42	ND	ND	ND	0.044
4.4'-DDE	41	50	ND	48	ND	ND	ND	2.1
methoxychlor	39	126	ND	52	14	ND	ND	<10
gamma-chlordane	ND	ND	ND	29	ND	ND	ND	0.54
chromium (mg/kg)	101	31.7	17.4	198	37.4	71	3.4	10 or SB
lead (mg/kg)	607	154	81.3	1620	122	216	2.1	SB

ND=Non Detect
MDL=Minimum Detection Level
SB=Site Background

Comments

1. Based on the information provided on the VOA analyses for samples DW#1 25'-27', DW#1 30'-32' and DW#6 35'-37', it appears that the decision to analyze these samples by the medium-level protocol may not have been warranted. Similarly, the 5-fold dilutions performed for the semivolatile analyses for samples DRAIN, DW#9, DW#5 and possibly DW#7 do not appear to have been warranted. It is possible that the laboratory's screening data justify these actions.

2. Very high recoveries (up to 1900%) were observed for the pesticide surrogate compound dibutylchlorendate (DBC) in the majority of soil samples. These recoveries are likely due to the coelution of a contaminant (e.g., phthalate esters) with the surrogate. Because of this problem, method performance for pesticides/PCBs on a sample-specific basis cannot be assessed. In addition, chromatographic stability (viz., assessment of chromatographic shift) could not be assessed. This is of concern because a number of pesticides were outside the established retention time windows in the closing calibration checks.

With regard to data usability, the principal areas of concern include blank results, holding times, internal standard areas and calibrations. Based upon the data packages reviewed, the following organic data qualifiers are offered. It should be noted that the following data usability issues represent an interpretation of the quality control results obtained for the project samples. Quite often, data qualifications address issues relating to the sample matrix problems. Similarly, the validation guidelines routinely specify areas of the data that require qualification, yet the methods used for analysis do not require any corrective action by the laboratory. Accordingly, the following data usability issues should not necessarily be construed as an indication of laboratory performance.

Organic TCL Data Qualifiers

- Due to the presence of methylene chloride, toluene and bis(2-ethylhexyl)phthalate in field blanks, trip blanks and/or laboratory method blanks, these compounds in the following samples should be considered "not-detected" and have been flagged "U" on the data tables (Section 2, Part A). For results reported at levels less than the CRQL, the result has been replaced with the CRQL with the appropriate "U" qualifier code.

Compound	Applicable Samples
methylene chloride	All positive soil sample results.
toluene	DW#3

Compound	Applicable Samples
bis(2-ethylhexyl)phthalate	DW#1 25'-27', DW#1 30'-32', DW#6 35'-37', DW#6 30'-32', DW#7 45'-47', DW#4, DW#4RE, DW#1, DW#1RE, DW#5, DW#5RE, DW#7, DW#8, DW#8RE, DW#9, DRAIN, DW#1MS/MSD and DW#1MS/MSDRE

Although the results for methylene chloride, toluene and bis(2-ethylhexyl)phthalate in several of the aforementioned samples may appear to be substantial, they actually represent instrument concentrations similar to those observed in the blank(s) subsequently multiplied by large dilution factors.

- All positive soil sample results for acetone are unreliable and have been flagged "R" on the data tables. According to verbal indications from project management, acetone was used as a field equipment decontamination solvent.

- The analyses for 2-nitroaniline in samples Field Blank 821, DW#2, DW#3, DW#6, DW#7, DW#8, DW#9, DRAIN and DW#1MS/MSDRE are unreliable and have been flagged "R" on the data tables. A zero response factor was obtained for 2-nitroaniline in the associated calibration check standard. It is possible that a "normal" response was obtained, but the automated search and quantitation data system procedures "missed" the detection for 2-nitroaniline.

- The analyses for indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene in samples RB-1, DW#1MS/MSD and DW#5 and chloroethane in sample DRAIN are unreliable and the results have been flagged "R" on the data tables. High percent differences (>90%) were obtained for these compounds in the associated calibration check standard.

- The analyses for *delta*-BHC, endosulfan II, 4,4'-DDD, endosulfan sulfate and endrin ketone in samples DW#3, DW#4, DW#5, DW#6, DW#7, DW#8, DW#9 and DRAIN are unreliable and the results have been flagged "R" on the data tables. These pesticides were outside of the established retention time windows in the calibration standards run following these samples. The lack of meaningful DBC shift information (see Comment #2) exacerbated this assessment.

- The positive results for *alpha*-BHC, *beta*-BHC, dieldrin, 4,4'-DDE, endrin, methoxychlor, *alpha*-chlordane and *gamma*-chlordane should be used with caution. Although the peaks that these identifications were based on were within the established retention time windows, examination of the chromatograms revealed numerous

ANSON ENVIRONMENTAL LTD.

33 Gerard Street • Suite 100
Huntington, New York 11743
516•351•3555
516•351•3615 Fax

January 13, 1995

To: Fred Elsen
United States Environmental Protection Agency

From: Fritzi Mazzola Gros-Daillon
Anson Environmental Ltd.

Subject: Analytical Standards for 1,4-dioxane
Anchor Chemical Superfund Site, Hicksville, New York
Administrative Order No. II CERCLA-90208

During the next round of soil and groundwater sampling at the above referenced site, we will be sampling for volatile and semi-volatile organic compounds on the Target Compound List and the data will be prepared according to the CLP requirements. The analysis will be conducted by Laboratory Resources Inc.

The 1,4 dioxane detection in the groundwater is part of the standard package. For the soil analysis, there are three options. We would appreciate your guidance as to whether option 1 or 2 is acceptable or whether option 3 is the preference. The options are as follows:

1. Laboratory Resources has performed this analysis previously and has clearly demonstrated the ability to quantitate this compound down to 200 ppb. Therefore, we feel confident that the compound can be identified and semiquantified by GC/MS library search using standard CLP SOW.

2. A single point calibration can be performed for 1,4-dioxane only. Any positive hits for this compound can be quantitated against this single standard.

3. Full method validation for 1,4-dioxane can be performed to include 5 point calibration, daily calibration verification and 7 point MDL study.

Please let us know your preference for the detection method to be employed for the soil samples at this site. You may contact us at (516) 351-3555 or our fax number (516) 351-3615.

cc: Tom Taccone, USEPA Region II
Richard Leland, Esq., Rosenman & Colin

Called Fritzi and said that they should use option 3
Since it gives you the most quantitative results.
T. Taccone 1/17/95

302842

ROSENMAN & COLIN

575 MADISON AVENUE, NEW YORK, NY 10022-2585

TELEPHONE (212) 940-8800
CABLE ROCOKAY NEWYORK
TELECOPIER (212) 940-8776
(212) 935-0679
TELEX 427571 ROSCOL (ITT)
971520 RCFLC NYK (W.U.)

January 30, 1995

SAMUEL I. ROSENMAN (1896-1973)
RALPH F. COLIN (1900-1985)

WASHINGTON OFFICE
1300 19TH STREET, N. W.
WASHINGTON, D.C. 20036
TELEPHONE (202) 463-7177

WRITER'S DIRECT DIAL NUMBER
(212) 940-7065

Via Federal Express and Telecopier

Mr. Thomas Taccone
Project Manager
United States Environmental Protection Agency
NY/Caribbean Superfund Branch II
26 Federal Plaza, Room 737
New York, New York 10278

Re: Anchor Chemical Site
500 West John Street

Dear Mr. Taccone:

This confirms our telephone conversation of January 17, 1995 during which you advised me that you would provide written comments to our "Response to EPA's September 30 Comments on the Revised Remedial Investigation Report" dated December 28, 1994 prior to February 6. As you are aware, Anson Environmental, Ltd. is scheduled to commence sampling at the Site on February 7.

We would appreciate it if you could provide EPA's comments to us before the end of this week in order to give us an opportunity to review them before sampling commences next week.

Thank you for your cooperation.

Sincerely,

Helen Collier Mauch

Helen Collier Mauch

HCM/rlr

cc: James Doyle, Esq.
Mr. Arthur Sanders
Richard G. Leland, Esq.

302843

February 1, 1995

Helen Collier Mauch, Esq.
Rosenman and Colin
575 Madison Avenue
New York, New York 10022-2585

Re: Draft Remedial Investigation Report Comment Letter
Anchor Chemical Superfund Site

Dear Ms. Collier Mauch:

As we recently discussed on January 17, 1995, we are endeavoring to review the various divisional comments and compile our comment letter to you concerning the revised remedial investigation report on or before February 6, 1995. Contrary to your January 30, 1995 letter, however, in that conversation we neither stated nor promised that such comments would be provided by that date, but we merely projected February 6th as a possible date. Furthermore, Mr. Anson's December 28, 1994 letter indicated that Section 4 would be revised to mention MCLs as ARARs. Mr. Taccone has contacted Mr. Anson to remind him that the revisions are due, and Mr. Anson indicated that he is preparing it and it would be provided possibly today. Until we receive and review this, the comment letter cannot be sent.

Lastly, while we understand your interest in the contents of the letter, and we will certainly transmit the comment letter to you as soon as it is executed. However, we do not see it as a condition precedent to the sampling event scheduled for February 7th and will not accept the absence of the comment letter as a reason for any delay.

If you have any questions on this matter, you may contact me at (212) 264-4472.

Sincerely,

James Doyle
Assistant Regional Counsel
Office of Regional Counsel

cc: Dean Anson
James O'Brien, Esq.

302844

2/1/95

FEB 2 1 1995

K.B. Company
c/o Jerry Speigel Associates
375 North Broadway
Gericho, New York 11753

Dean Anson
Anson Environmental
33 Gerard Street
Huntington, NY 11743

Attention: Arthur D. Sanders,
President

Richard G. Leland, Esq.
Rosenman and Colin
575 Madison Avenue
New York, New York 10022-2585

Re: Anchor Chemical Superfund Site; EPA Comments on the Revised Draft Remedial Investigation Report

Dear Sirs:

The U.S. Environmental Protection Agency ("EPA") has reviewed Anson Environmental's December 28, 1994, response to EPA's September 30, 1994, letter. EPA's final set of comments follow. A final draft RI report should be submitted within the time frame specified below. Comments which were raised in EPA's letter of September 30, 1994, but not raised again, have been adequately addressed.

Section 4.0 General

New comment 1: The revised language which identifies specific MCLs as ARARs for the Site should be have been included in Anson's response letter. The language will be reviewed upon receipt of the final draft RI.

Comment 15: Page 2, paragraph 1 of the response - The first sentence should read as follows: "Elevated levels of chromium and lead were detected in the groundwater in the April and November of 1992 sample rounds."

Comment 15: Page 2, paragraph 3 of the response should be modified to read: "Because data validation rejected the analytical result for lead in groundwater for the April of 1992 sample round, the analytical result for the November of 1992 sample round will be used to represent the background concentration of lead in groundwater for the site."

302845

SYMBOL --->	WNYS2	WNYS2	NYCSB2					
SURNAME -->	TACCONE	LYNCH	PETERSEN					
DATE ----->	2/16/95	2/16/95						

New comment 3: Please include and discuss the analytical data for the additional soil samples.

Section 4.1 Drywell, Drain and Cesspool Analysis

New comment 2: Since the presence of methylene chloride was not confirmed, it will be dropped as a Site contaminant. Toluene, however, was not rejected by the data validation process and therefore will be recognized as a Site contaminant.

Comment 18: Page 4, paragraphs 2 and 3 of the response: In paragraph 2, line 4 change "200 ppb" to "280 ppb" and in paragraph 3, line 4, change "1300 ppb" to "1800 ppb."

Page 4, paragraph 5 and page 5, paragraph 3 of the response: The final RI should recognize that bis(2-ethylhexyl) phthalate is a Site contaminant. The substance was detected in the sediment sample for dry well 2 at 25 to 27 ppm. In addition, the draft RI report on page 1-11 indicates that "phthalates were used in blue inks," which were stored on-site.

Comments 19 and 20: Again, the final draft should indicate that bis(2-ethylhexyl) phthalate is a site contaminant.

Section 4.3 Monitoring Well Installation and Sampling and Analysis - 2 Rounds

New Comment 6: Please include and discuss in the report the analytical data for the additional groundwater samples.

Comment 22: As indicated above, EPA considers bis(2-ethylhexyl) phthalate to be a Site contaminant. Acetone should also be considered a Site contaminant because it was not rejected by the data validators and was stored on Site.

Section 5.2.1 Contaminant Persistence in Vadose Zone

Drywells, Drain, and Cesspool Sediments

Comment 42: Modify the first two sentences of the revised section to read as follows: "Elevated concentrations of contaminants in the drywell sediments and drain will be excavated and moved off-site. A removal action will be implemented at a future date, and will be scheduled with the concurrence of the EPA."

Section 5.3.2 Saturated Zone

Comment 44: Paragraph 2 of the response: Eliminate the first sentence. As EPA has indicated in past correspondence on the draft RI, direct comparisons of soil and ground water data should not be made. Also, please remove from table 4-9 the analytical results for the soil sample taken from the bore hole for MW-6D.

In addition, the text should recognize that groundwater data for monitoring wells 1S, 2, 3, 5S and 5D revealed elevated levels of lead, chromium, cobalt, nickel, magnesium, manganese, and zinc when compared to the data for background wells 6S and 6D and NYSDEC's MCLs.

Paragraph 3 of the response: Eliminate the phrase "and reach background levels."

Within 20 days of your receipt of this letter please submit a final draft RI report. A supplement to the report, which includes the additional soil and groundwater samples, should be submitted by April 14, 1995.

Any questions on this matter should be directed to Mr. Tom Taccone at (212) 264-9128.

Sincerely yours,

Carole Petersen, Chief
NY/Caribbean Superfund Branch II

cc: J. Greco, NYSDEC
S. Boone, CDM
J. O'Brien, Esq.

bcc: J. Doyle, ORC

ANSON
ENVIRONMENTAL LTD.

33 Gerard Street • Suite 100
Huntington, New York 11743
516•351•3555
Fax 516•351•3615

April 12, 1995

Mr. Thomas Taccone
US Environmental Protection Agency, Region II
290 Broadway, 20th floor
New York, NY 10278-0012

Re: Anchor Chemical Superfund Site
Supplemental Report to RI

Dear Mr. Taccone:

In comments addressing Section 4.2 "Tank Investigation and Soil Borings Inside the Building" (EPA letter dated September 30, 1994, from Carole Petersen to K.B. Company), the EPA required that three soil borings be installed outside the building. Two borings were to be vertical in nature and the third was to be installed on an angle so that a soil sample be collected at a depth of 17 feet directly under tank 14. Boring installation and sampling was completed in February.

EPA also required additional groundwater sampling. Therefore, two groundwater samples were collected from wells 4 and 5S located down gradient of the building on-site. The original plan was to sample wells 2, 3 and 5S. However, wells 2 and 3 were dry on February 8th when an attempt was made to collect the samples. Therefore, the EPA required sampling of well 4 instead.

The soil and groundwater samples were transported to Laboratory Resources Inc. in Teterboro, New Jersey for analysis. The analytical results were validated by Environmental Standards Inc. of Valley Forge, Pa.

The following is a report of the findings of that investigation.

Very truly yours,

Dean Anson II

Dean Anson II

cc: A. Sanders, Spiegel Associates
F. Werfel, Spiegel Associates
R. Leland, Esq., Rosenman & Colin
J. Greco, NYS Dept. of Health
J. Doyle, Esq., USEPA
J. O'Brien, Esq., Anchor Chemical

302848

Anchor Chemical Site
500 West John Street
Hicksville, New York

Table 4-8- Inorganics in Groundwater-Round 1-April 1992 (ppb)

Inorganic Analyte	MW 1D	MW 1S	MW 2	MW 3	MW 4	MW 5D	MW 5S	MW 6D	MW 6S	MW 7D	MW 7S	1992 NYSDEC MCL
aluminum	3020*		5600*	2260*		1670*	1780*					NS
arsenic												25
barium	37*	10*	38*	68*	27*	54*	11*	7*	35*	53*		1000
cadmium											4	10
calcium	19000	9200	5880	11500	9290	23600	25200	12400	19300	16300	6820	NS
chromium	132*	11*	317*	227*	14*	48*	137*	33*	13*	18*	33*	50
copper			74*	115*		59*	108*			37*		200
iron	3990	490	7990	4510	615	1920	3470	458	707	754	489	300
lead	29.4		74.7*	30.2*		31.4*	44.4*			27.9*	27.9*	25
magnesium	2180	1120	1310	1800	1500	558	1580	1670	2450	1720	651	35000
manganese	32	25*	95*	74	53*	23*	52*	92*	43*	35*	26*	300
mercury				.2*								2
nickel	38	14	17	50		28*	92	22		22	21	NS
potassium	3010		2340	2590		61500		5010	2680	2540	4820	NS
sodium	41200	19700*	19300*	25400	3600*	38700	2920*	12700*	14000*	16100*	4850*	20000
vanadium	6		13									NS
zinc	45	50			76	66	67		48	61	45	300
cyanide												100

*estimated
MCL = maximum contaminant level (ug/L)
NS = no standard

Anchor Chemical Site
500 West John Street
Hicksville, New York

Table 4-9 - Inorganics In Groundwater-Round 2 - November, 1992 (ppb)

Inorganic Analyte		MW 1D	MW 1S	MW 2	MW 3	MW 4	MW 5D	MW 5S	MW 6D	MW 6S	MW 7D	MW 7S	1992 NYSDEC MCL
aluminum	*	314	35100	53100	34300	1690	3320	1710	353	803	675	890	NS
arsenic			7.2*	9.2	6.4								25
barium	*	39.8	110	230	169	56	79.5	46.6	45.1	75.7		63.8	1000
cadmium													10
calcium	*	6980	25400	9750	16100	9490	50500	20700	13900	24200	6360	9080	NS
chromium		19.7*	353	1440	1150	15.5*	101	131	45.6	54.4	47.2	19.6*	50
cobalt			10.5	16.1	20.3								5
copper	*	36.2	169	123	179	26	112	102	33	79.8	36.9	75.1	200
iron	*	558	28300	40900	31300	1830	2450	3420	634	1370	1520	1230	300
lead	*	17.2	87	240	71.5	10.2	40.4	33.6	25.2	29.4	25.8	27	25
magnesium	*	827	2890	2750	3070	1530	2610	1870	1970	2760	645	1010	35000
manganese		8.2	226	436	482	64.6	68.8	44.4	20.9	58.4	22.7	14.3	300
mercury			0.09	0.17	0.06			0.06					2
nickel			97.4	51.9	64		23.8	63.2	20.9		8.2		NS
potassium	*	2540	4510	5860	4920	1930	3500	2150	2270	4620	1010	7050	NS
sodium		21700	39600	52500	24600	6820	27000	2090	11100	10600	2170	4160	20000
vanadium			41.9	72.4	53.2								NS
zinc	*	67.7	229		73.6	94.4	342	173	94.2	97	154	70.7	300
cyanide													100

*estimated in all wells or in well specified
NS = no standard

MCL = maximum contaminant level (ug/L)

Table 5-1 Concentration of Analytes found in Drywell #2 at Various Depths (µg/Kg)
(ppb)

Analyte	Surface	15-17 feet	25-27 feet	Background*	Rec. Soil Cleanup Obj. (ppm)
1,1-dichloroethane	1600	ND	ND	ND	0.2
1,1,1-trichloroethane	3300	ND	ND	ND	0.8
toluene	4800	2300	ND	ND	1.5
ethylbenzene	4800	4800	ND	ND	5.5
total xylenes	67000	82000	ND	ND	1.2
naphthalene	9800/9500	290	ND	ND	13
2-methylnaphthalene	4100/3900	150	ND	ND	36.4
phenanthrene	370/320	58	ND	ND	50
di-n-butylphthlate	2400/2500	100	ND	ND	8.1
fluoranthene	300	69	ND	ND	50
butylbenzylphthalate	5100/5200	410	ND	ND	50
bis(2-ethylhexyl)phthalate	25000/27000	ND	ND	36	50
pyrene	ND	66	ND	ND	50
4-chloro-3-methylphenol	ND	ND	570	ND	0.240 or MDL
aroclor 1254	ND	230	ND	ND	NS
MEASURED IN ppm					
chromium**	463	392	32.9	3.4	10 or SB
lead**	1210	130	4.6	2.1	SB

* from MW #6D soils
** units are mg/Kg
ND=None Detect
NS = No Standard
SB = Site Background

ppb x 10EXP-3 = ppm

Table 5-4 Concentration of Analytes found in Drywells #1, 6 & 7 at Various Depths (µg/Kg)

Analyte						(ppm)
Drywell #1	**Surface**	**25-27 feet**	**30-32 feet**	**Background***		**Rec. Soil Cleanup Obj.**
bis(2-ethylhexyl)phthalate	9700/11000	ND	ND	36		50
chromium**	36.1	ND	ND	3.4		10 or SB
lead**	124	1.8	2.5	2.1		SB
Drywell #6	**Surface**	**30-32 feet**	**35-37 feet**	**Background***		
toluene	5	ND	ND	ND		1.5
butylbenzylphthalate	5100	ND	ND	ND		50
bis(2-ethylhexyl)phthalate	26000	ND	ND	36		50
Dieldrin	18	ND	ND	ND		0.44
4,4'-DDE	75	ND	ND	ND		2.1
Methoxychlor	24	ND	ND	ND		<10
chromium**	240	7.6	6.7	3.4		10 or SB
lead**	1120	6.7	1.8	2.1		SB
Drywell #7	**Surface**	**40-42 feet**	**45-47 feet**	**55-57 feet**	**Background***	
carbon disulfide	5	ND	ND	ND	ND	2.7
bis(2-ethylhexyl)phthalate	ND	ND	ND	ND	36	50
Dieldrin	19	ND	ND	ND	ND	0.44
4, 4'-DDE	10	ND	ND	ND	ND	2.1
Methoxychlor	7.5	ND	ND	ND	ND	<10
gamma-Chlordane	3.4	ND	ND	ND	ND	0.54
chromium**	54.2	ND	ND	ND	3.4	10 or SB
lead**	157	1.0	0.78	0.84	2.1	SB

* from MW #6D soils

** units are mg/Kg

ND = None Detect

SB = Site Background

Table 5-4a Concentration of Analytes found in Drywells #3, 4. 5, 8, 9 and Drain (µg/Kg)

Analyte	DW 3	DW 4	DW 5	DW 8	DW 9	DRAIN	BACKGROUND*	(ppm) Rec. Soil Cleanup Obj.
carbon disulfide	ND	ND	ND	ND	21	ND	ND	2.7
toluene	ND	64	ND	200	ND	ND	ND	1.5
benzoic acid	ND	ND	53/73	ND	ND	ND	ND	2.7
phenanthrene	ND	260/310	ND	1800/1500	260	190	ND	50
anthracene	ND	ND	ND	390	ND	ND	ND	50
di-n-butylphthalate	ND	ND	63/72	ND	ND	480	ND	8.1
fluoranthene	300	700/810	ND	3700/3400	440	410	ND	50
butylbenzylphthalate	1100/1100	ND	64/48	ND	370	300	ND	50
bis(2-ethylhexyl)phthalate	26000/21000	ND	ND	ND	ND	ND	36	50
pyrene	ND	790/860	/34	3700/4500	340	320	ND	50
benzo(b)fluoranthene	ND	1000/1000	ND	2900/2700	ND	ND	ND	1.1
chrysene	ND	520/590	ND	1900/2000	250	230	ND	0.4
benzo(a)anthracene	ND	/490	ND	1600/	ND	ND	ND	0.224 or MDL
benzo(k)fluoranthene	ND	560/500	ND	1700/1700	ND	ND	ND	1.1
benzo(a)pyrene	ND	580/590	ND	1400/1100	ND	ND	ND	0.061 or MDL
indeno(1,2,3-cd)pyrene	ND	ND	ND	/1500	ND	ND	ND	3.2
beta-BHC	ND	ND	ND	ND	8.2	ND	ND	0.2
dieldrin	87	16	ND	42	ND	ND	ND	0.044
4.4'-DDE	41	50	ND	48	ND	ND	ND	2.1
methoxychlor	39	126	ND	52	14	ND	ND	<10
gamma-chlordane	ND	ND	ND	29	ND	ND	ND	0.54
chromium**	101	31.7	17.4	198	37.4	71	3.4	10 or SB
lead**	607	154	81.3	1620	122	216	2.1	SB

* from MW #6D soils
** units are mg/Kg
ND=Non Detect
MDL = Minimum Detection Limit
SB = Site Background

Table 5-5 Background Conditions in Upgradient Monitoring Wells 1 and 6, Shallow and Deep

Analyte	MW 1S		MW 1D		MW 6S		MW 6D		1992 NYSDEC
	1st Round	2nd Round	1st Round	2nd Round	1st Round	2nd Round	1st Round	2nd Round	MCL
bis(2-ethylhexyl)phthalate	ND	ND	8	65	6	ND	5	ND	50
chromium	11	353	132	19.7	13	54.4	33	45.6	50
lead	22	87	29.4	17.2	18.2	29.4	10.5	25.2	25

units are in µg/Kg
ND = Non Detect

Table 5-6 Concentrations in Downgradient Monitoring Wells 2, 3, 4, 5S, 5D, 7S and 7D

Analyte	MW 2		MW 3		MW 4		MW 5S		1992 NYSDEC MCL
	1st Round	2nd Round	1st Round	2nd Round	1st Round	2nd Round	1st Round	2nd Round	
bis(2-ethylhexyl)phthalate	ND	ND/ND	ND	ND/ND	19	66/57	65	53	50µg/L
chromium	317	1440	227	1150	14	15.5	137	131	50µg/L
lead	74.7	240	30.2	71.5	ND	10.2	44.4	33.6	25µg/L

	MW 5D		MW 7S		MW 7D		
	1st Round	2nd Round	1st Round	2nd Round	1st Round	2nd Round	
bis(2-ethylhexyl)phthalate	30	ND	17	100/160	17	62	50
chromium	48	101	33	19.6	18	47.2	50
lead	31.4	40.4	27.9	27	27.9	25.8	25

units are in µg/Kg - ppb
ND = Non Detect
1st Round = 4/92
2nd Round = 11/92

ROSENMAN & COLIN

575 MADISON AVENUE, NEW YORK, NY 10022-2585

TELEPHONE (212) 940-8800
CABLE ROCOKAY NEWYORK
TELECOPIER (212) 940-8776
(212) 935-0879
TELEX 427571 ROSCOL (ITT)
971220 RCFLC NYK (W U)

August 29, 1994

SAMUEL I. ROSENMAN (1896-1973)
RALPH F. COLIN (1900-1985)

WASHINGTON OFFICE
1300 19TH STREET, N. W.
WASHINGTON, D. C. 20036
TELEPHONE (202) 463-7177

WRITER'S DIRECT DIAL NUMBER
212-940-7065

Via Telecopier and Regular Mail

Marsden Chan, Section Chief
New York State Department of Environmental Conservation
Federal Project Section
50 Wolf Road
Albany, NY 12233-7010

Thomas Taccone, Project Manager
U.S. Environmental Protection Agency, Region II
26 Federal Plaza
New York, New York 10278-0012

Re: Anchor Chemical Superfund Site

Gentlemen:

Attached is a memorandum prepared by Anson Environmental Ltd. setting forth the technical basis for our request for no further action in connection with Tank 14.

As you are aware, this is the second time that our client has been asked to collect samples from beneath the building at the site. The first time, protocol as stipulated in the EPA approved Project Operations Plan was closely followed. Despite this fact, further sampling has been requested which will result in the disruption of tenant operations within the building and the expenditure of additional funds by our client.

Since the conditions at the site prevent the migration of 2-butoxyethanol and because its detection at low levels would not ultimately require any cleanup, we ask that you grant the request for no further sampling.

Thank you for your courtesies in this matter.

Very truly yours,

Helen Collier Mauch

Enclosure
cc: Jerry Spiegel Associates(w/enc.)

302808

ANSON ENVIRONMENTAL LTD.

33 Gerard Street • Suite 100
Huntington, New York 11743
516•351•3555
Fax 516•351•3615

August 29, 1994

To: Richard Leland, Esq.
Rosenman & Colin

From: Dean Anson II
Anson Environmental Ltd.

Re: Tank Investigation
Anchor Chemical Site
500 West John Street, Hicksville, NY

It is our understanding that the agencies' concern is that the detection of 2-butoxyethanol in indoor borings 1 and 2 at the Anchor Chemical site indicates a possible release from Tank 14. However, when all of the data are considered, as explained in more detail below, it is our opinion that no further sampling is warranted.

The detection of 2-butoxyethanol in indoor borings 1 and 2 has prompted the request for additional soil samples downgradient within 1 to 5 feet of the southwestern and southeastern corners of the tank. The 2-butoxyethanol is also known as ethylene glycol monobutyl ether. It was detected as a volatile organic and semi-volatile organic as a tentatively identified compound (based upon a laboratory library search) as it is not on the Target Compound List. The compound was detected in the soil sample directly below the tank area at a maximum depth of 17 feet below the surface in indoor boring #2. This sample was collected approximately 20 feet from the southeastern corner of Tank 14, which was known to have contained this compound.

The sample taken by the USEPA oversight contractor at 49-51 feet below the surface (just above the groundwater interface) did not detect 2-butoxyethanol in boring #2. The conditions at the site indicate that the migration of constituents to the groundwater interface at 49-51 feet would be vertical. Therefore, the absence of 2-butoxyethanol at the groundwater interface and the lack of exposure to natural forces such as rainwater, indicates the compound is restricted to an area well above the

302809

groundwater interface. Moreover, the low solubility (in water) of 2-butoxyethanol, the sandy/gravely soil and the absence of any hydraulic force supports this conclusion.

In the first round of groundwater samples collected in April, 1992, 2-butoxyethanol was not detected in any of the monitoring wells. In the November, 1992 sampling (with reduced detection limits required by the USEPA), the compound was detected at an estimated level of 8 µg/L in monitoring well #7S.

The NYSDEC TAGM does not list a specific groundwater cleanup level for this compound; however, 50 µg/L is the limit for unspecified organic compounds. Therefore, the estimated value of 8 µg/L in MW#7S is significantly lower than the cleanup standard for volatile compounds.

The soil cleanup standard would be 1 mg/Kg for 2-butoxyethanol as the conservative calculation is 20 times the groundwater standard. In indoor boring #1, the levels of 2-butoxyethanol detected as a volatile organic compound were estimated at .030 mg/Kg and .060 mg/Kg at 10-12 feet and 15-17 feet respectively. The estimated level of 2-butoxyethanol detected as a volatile compound in indoor boring #2 was .100 mg/Kg, .200 mg/Kg, and .100 mg/Kg at 5-7 feet, 10-12 feet and 15-17 feet respectively. These levels are well below the soil cleanup standard for 2-butoxyethanol as a volatile organic compound. As a semi-volatile compound, the estimated levels of detection for 2-butoxyethanol were 6.400 mg/Kg at 10-12 feet and 2.100 mg/Kg at 15-17 feet. Since the levels of 2-butoxyethanol as a volatile organic compound would not require any cleanup, additional sampling is not warranted.

The issue of whether 1,4 dioxane and 2-butoxyethanol are breakdown products of each other should be addressed since it is our understanding that the presence of 1,4 dioxane in MW-3 is one basis for the request that additional soil samples be conducted. In fact, the two compounds have similar chemical formulas as they are both glycol ethers. The compound 1,4-dioxane is characterized as $C_4H_8O_2$ and 2-butoxyethanol is $C_6H_{12}O_2$. However, the chemical structure of these compounds is significantly different; that is, 1,4-dioxane has a ring or cyclic structure and 2-butoxyethanol has a straight chain structure. A significant amount of energy (heat) is necessary to make the changes necessary to open the ring

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In the environment present at the site (storage tanks abandoned since 1983 under a 6-inch concrete floor through which percolation is highly improbable), it is highly unlikely that the conditions are present to effect the chemical changes necessary to go from 1,4-dioxane to 2-butoxyethanol or vice versa. The necessary chemical changes would not be a degradation or breakdown but instead a synthesis requiring at least heat and oxygen, the former of which is not present to drive this chemical reaction.

It is important to keep in mind that 1,4 dioxane was detected in the groundwater at a level of 110 parts per billion in one well (MW-3) in one sampling (April, 1992). It was not detected at the lower detection limits in any of the monitoring wells in the second round of sampling in November, 1992. The presence of 1,4 dioxane in one sampling event, and the tenous relationship with 2-butoxyethanol, absent significant energy, is not a sufficient basis for requesting additional soil sampling beneath the tank.

It is our opinion that the following facts and data support a finding of no further investigation with respect to Tank14:

1. Tank 14 passed the tightness test in 1981, has been out of use since 1983, and was found to be filled with concrete by Enro-Serve in June, 1991.

2. 2-butoxyethanol is confined to a resticted area which poses no risk to human health or the environment. It was not detected in the soil at the groundwater interface under the tank area and is not exposed to any hydraulic forces which would cause its migration.

3. The levels of 2-butoxyethanol found in IB #1 and IB #2 are well below the action levels for volatile organic compounds.

4. Indoor borings #1 and #2 are sufficiently close to Tank 14 to provide a meaningful indication of the level of 2-butoxyethanol present.

5. 2-butoxyethanol was detected at a low level, nearly equivalent to the groundwater standard in only one downgradient well during

one sampling event.

6. 1,4-dioxane is not a breakdown product of 2-butoxyethanol.

7. Even assuming that 1,4-dioxane is a breakdown product of 2-butoxyethanol, its detection in one sampling event, subsequent to which its presence was not detected, does not justify concern.

(KJDP)

SEP 30 1994

K.B. Company
c/o Jerry Speigel Associates
375 North Broadway
Gericho, New York 11753

Attention: Arthur D. Sanders,
President

Dean Anson
Anson Environmental
33 Gerard Street
Huntington, NY 11743

Richard G. Leland, Esq.
Rosenman and Colin
575 Madison Avenue
New York, New York 10022-2585

S. Sucharski
Blasland, Bouck and Lee
1 Suffolk Square
Suite 210
Islandia, NY 11787

Re: Anchor Chemical Superfund Site; EPA Comments on the Revised Draft Remedial Investigation Report

Dear Sirs:

The U.S. Environmental Protection Agency ("EPA") has completed its review of the proposed revisions to the draft Remedial Investigation ("RI") report, dated September 1993, for the Anchor Chemical Superfund Site. These revisions were submitted on August 3, 1994 and were in response to EPA's May 6, 1994 letter, which commented on the draft report. The comments below are numbered to correspond to the comments in EPA's May 6, 1994 letter.

Section 3.2 Contaminant Transport

Comment 11. The response indicates that Figure 3-5 identifies the cesspool locations at the Site. However, a copy of the figure was not included with the response. The figure should show the locations of both the cesspool and drywell samples and be included in your response to this letter.

Figure 3-3B needs to be labeled as "Figure 3-3B."

Section 3.3 Geological Investigation

Comment 12. Please revise Table 3-3 to reference the development dates for wells 1S, 2 and 3. The specific days the wells were developed should be referenced.

302813

SYMBOL --->	WNYS2	WNYS2	NYCSB2					
SURNAME -->	Taccone	Lynch	Petersen					
DATE ----->	9/21/94	9/29/94						

Section 4.0 General

New comment 1. The response included the tables requested. However, the report needs to be revised to reference the tables and the MCLs as ARARs for the site. Also, the report should be revised to eliminate any comparison of groundwater MCLs to soil sample data.

Comment 15. The proposed revision to Section 4 is incorrect. All of the April 1992 data for monitoring wells 1S, 4, 6S and 6D should not be disregarded because the result for lead was rejected. Only the sample result for lead is in question. Further, the proposed table should not indicate that lead was not detected in the April 1992 sample, but that the result is unreliable ("R") due to the presence of lead in the blank samples.

Include drywells 2, 3 and 6 in the proposed table on page 6 of the response, which attempts to relate the detected concentrations of lead and chromium in the monitoring wells with the concentrations detected in the drywells. The response also refers to "other factors" which may have caused the lead and chromium concentrations to be in the groundwater. The discussion should explain how the drywell sample results relate to the groundwater sample results and the "other factors."

Section 4.1 Drywell, Drain and Cesspool Analysis

New comment 2. The reported concentrations of methylene chloride in drywells 2 and 3 were 2,100 ppb and 1,100 ppb. The trip blank for these samples had a methylene chloride concentration of 3 ppb. The reported result for toluene in drywell 3 was 1,100 ppb, while the trip blank had a concentration of 1 ppb. As explained in my letter of August 5, 1993, because the trip sample concentrations are less than ten times the sample results for methylene chloride and toluene, no data qualifier is needed.

Comment 18. The response only indicates that Section 4.1 will be revised to reference the data from wells 6S and 6D. Please submit the proposed language for review.

Comment 19. Page 9 of the response: Change "MCL" to "New York State clean up objectives." Also, the results of the cesspool samples should be discussed in Section 4.1. Further, the response only mentions that the cesspool samples do not exceed New York State standards for volatile organic compounds ("VOCs"). The samples were also analyzed for Semi-VOCs, metals, pesticides, PCBs and inorganics, and these results also should be mentioned.

Section 4.2 Tank investigation and Soil Borings Inside the Building

New comment 3. The response indicated that 2-butoxyethanol was not detected as semi-volatile in the samples for indoor boring 1. However, the compound was detected as a semi-volatile at indoor boring 2 at 6.4 ppm (10'-12') and 2.1 ppm (15'-17').

On September 7, 1994, Tom Taccone, of EPA, Jon Greco and Marsden Chen, of NYSDEC, and Helen Mauch and Dean Anson, for Respondent, participated in a conference call concerning the additional soil and groundwater samples, which were directed in EPA's letter of May 6, 1994. Mr. Taccone indicated that EPA and NYSDEC had reviewed Helen Mauch's August 29, 1994 letter and the attached memorandum from Dean Anson, which were offered to support its request that EPA reconsider the additional sampling requirement. Mr. Taccone explained that EPA, with input from NYSDEC, decided to maintain its position that additional soil and ground water samples are necessary. EPA disagrees with Anson Environmental's conclusion that the sample results from indoor borings 1 and 2 are close enough to tank 14 to provide an adequate assessment of any contamination which may exist around or under the tank.

EPA and NYSDEC recognize the space constraints imposed by the physical layout of the room where tank 14 is located. The additional indoor soil borings would not be easily obtained, and we understand that sampling may potentially impact the building tenant. Therefore, during the conference call, Mr. Chen proposed, and EPA concurs, that three soil borings may be taken outside the building. Two borings will be advanced vertically. For each vertical boring, soil samples will be collected in accordance with the April 10, 1991, Project Operations Plan for the RI/FS, to a depth of 35 feet. If elevated OVA readings (above background) are not found, the boring can be terminated. If an elevated OVA reading is found, then the boring should be advanced to the water table. The third boring will be advanced at an angle so that a soil sample can be collected at a depth of 17 feet directly under tank 14.

Comment 20. EPA maintains its comment. Revise the report to reference bis(2-ethylhexyl) phthalate as a site contaminant.

Comment 21. Paragraph three of the response indicates that the samples "were re-analyzed." Was this re-analysis the actual headspace analysis, which was preceded by the OVA probe, which was passed over the sample when the split spoon was first opened? Please revise the discussion to clearly describe all OVA sample analyses.

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 7010

Thomas C. Jorling
Commissioner

December 1, 1992

Ms. Dorothy Allen
Eastern NY/Caribbean Section II
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278

Re: Disposal of Investigation Derived Soils
Anchor Lith Kem-Ko Site ID No. 130021

Dear Ms. Allen:

I have reviewed Mr. Dean Anson's September 9, 1992 submittal regarding the referenced subject. While I disagree with Mr. Anson's conclusion/ recommendation that the drummed soil should be disposed of as clean fill at a construction site; I feel that the data presented is generally sufficient to make a disposal determination consistent with New York State Department of Environmental Conservation guidance (i.e., Draft Technical and Administrative Guidance Memorandum: "Contained-In" Criteria Guidance; August 1992).

Mr. Anson's submittal indicated that several hazardous constituents and/or substances were detected at a level above an approved detection level and, therefore, must be managed at an approved 360 Solid Waste Management facility or managed on-site as per Section IV of the referenced guidance. I have made this determination based on information available to me which indicates that the substances positively detected are either not from a "listed process" or, if they were, were at a level deemed sufficiently protective for the stated disposal methods. This determination is limited to soils from MW-1D,1 MW-4, MW-6S, MW-6D, MW-5D, MW-7D, IB 1 IB 2, IB 5 and IB 6 only.

I recommend that Mr. Anson be informed of his options by your agency, as the USEPA is the technical and administrative lead for this site.

Please feel free to contact me at (518) 457-3976 if you would like to discuss this matter.

Sincerely,

Jonathan Greco

Jonthan Greco
Federal Projects Section
Bureau of Eastern Remedial Action
Div. of Hazardous Waste Remediation

600001

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 7010

June 9, 1993

Thomas C. Jorling
Commissioner

Mr. Thomas Taccone
Western NY/Caribbean Section II
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278

Re: Draft Remedial Investigation Report
Anchor Chemical Site ID No. 130021

Dear Mr. Taccone:

The New York State Department of Environmental Conservation (NYSDEC) has reviewed the referenced document and offers the following comments:

General:

The report was poorly organized and lacked certain data which is pertinent to a thorough review, e.g., groundwater flow data, exacting descriptions of features sampled, sample locations, etc. Furthermore, much of the report is not site specific and attempts are made to extrapolate too much from previous studies in the area.

Specific:

1. There is little or no description of sampling practices nor of the structures sampled. This is particularly true for the dry wells and cesspools. Drawings depicting the structure of these features should be included.

2. Page 3-9: The second paragraph indicates a serious technical flaw may have occurred during the purging of wells prior to sampling. Specifically, it appears that wells were surged and pumped prior to sampling; in effect, redevelopment occurred prior to each sampling event. Such a practice is inconsistent with both USEPA and NYSDEC guidance, as it would cause excessive volatilization of certain organic compounds, and certainly renders the data suspect.

3. Throughout the report, acetone and methylene chloride results are discounted as lab contaminants, however, it appears that the amounts detected in the environmental samples are often well above those detected in associated QA/QC samples. This is important as both chemicals were used and stored at the site and, more importantly, the tank which contained acetone is known to have leaked.

   Does the USEPA's quality assurance section agree with the assertions made by the consultant?

4. The two cesspools were sampled during the RI, however, the data is not reported because the shipment of samples was lost in transit. Though the USEPA has data from one of the cesspools (i.e., a split sample was taken), the other remains an unknown and should be resampled.

5. The various discussions with respect to groundwater flow direction are inadequate for the purposes of this study. The very generalized (i.e., regional) discussion presented in Section 2 is non-site specific, while the discussion in Section 4.5 is unsupported by any data or figures. This is of great importance because other sites in the immediate area indicate a southeastern flow direction, while the report claims a southwestern flow direction (see "Magnusonic Devices, Phase II Investigation", January 1990).

   I suggest another round of groundwater elevations be taken.

   Finally, a table or figure including the surveyed elevations of the ground surface and top of casing was to be included. Figure 3-2 depicts only one or the other (it is unclear which).

6. Geologic cross sections were to be provided based upon to bore logs. They are not presented.

7. Page 4-12 refers to Figure 3-2 as being a graphic depiction of the pumping tests, however, figure 3-2 is the survey map. Please correct. Also, more interpretation as to what the pumping tests mean to this investigation is needed.

8. The report should state the rationale for the selection of soil sampling depths for each boring. For example, did each of the samples which were sent to the lab exhibit the highest concentration of volatile organics when screened in the field? Was there any discoloration of the sample which caused it to be chosen?

   Finally, what was the exact method used to perform the field screening and sampling (i.e., were there any deviations from the POP)? Why is there a discrepancy in the inside boring logs between the organic vapor concentrations printed in the OVM column as opposed to that presented in the sample description column?

9. The discussion of the inside boring program (Section 4.2) is incomplete. No mention is made of the extraordinary OVA readings observed, the potentially explosive conditions encountered nor of the levels of 2-butoxyethenol discovered. Though this information is available in an appendix, it is the consultants task to properly summarize all data in the main body of the text. Also, there is no figure which depicts the actual boring locations. This is extremely important, as detections of 1-4 dioxane have been made in groundwater and there is a known location of a tank which formerly contained this substance. Obviously, borings need to be placed in the vicinity of that tank if this has not already been performed.

10. Page 4-3; last paragraph: The statement that the metals detected in drywell sampling are naturally occurring is misleading. The issue here is the concentration at which these metals were detected: Pb at 1620 ppm, Cr at 463 ppm and CN at 430 ppm. These levels are well above any established background and need to be discussed in the report. This is of particular interest as there are groundwater violations for both Cr and Pb.

11. Section 4 describes the analytical results for the sampling that was performed during the investigation. However, there is no mention of the high levels of lead and chromium found in MWs 1D, 1S, 2, 3 and 5 S except for tabulated results at the end of Section 4. An apparent attempt was made to describe the metals in groundwater at the end of Section 5. On page 5-11, the second paragraph states "Table 5-1 illustrates the levels of metals found in the groundwater in the vicinity of the site." Then on the next page there is Table 5-1 but it is labeled "Common range of metals in natural soils." After 5-1 is Table 5-2 which is a summary of groundwater data in Westbury, New York. The purpose of installing an upgradient well at this site was to use it as our background sampling location for the study. It is unclear why a table of data from what I assume is another hazardous waste site is presented as background levels. Please remove all discussions pertaining to Table 5-2 and rewrite to compare on-site values to either the upgradient well and/or to the applicable groundwater standards.

12. There needs to be an index of tables so that the reader can find the tables referred to in the text. Table 4-5 appears in the text on page 4-4 and all the other tables referred to in the text appear after Section 4. There are other tables that are unlabeled in the text.

    The analytical results listed in Tables 4-8, 4-9, and 4-10 do not have the units of concentration.

13. No attempt was made to describe the possible origin of the 1,4-Dioxane which was detected in the first round of groundwater samples at 120 ppb, which is above the MCL of 50 ppb for that compound.

14. The statement "The chemical compounds identified do not pose any threat to the groundwater or the public health," on pages 6-3 to 6-4, should be discussed more. This statement contradicts the statement on page 2-11 which describes how contaminated groundwater in Hicksville may be a threat to two water supply wells downgradient of the site. It is also contrary to the fact that several health-based groundwater standards have been exceeded in the downgradient wells. Please correct.

15. Page 6-3: It is stated that the only semi-volatile compound detected in the inside boring samples was bis(2-ethylhexyl)phthalate, however, 2-butoxyethanol was also found to be present and is known to have been used on-site. Please correct.

16. Page 6-3; bottom of page: What is the basis for stating that compounds detected in the drywells pose no threat to the groundwater or the public health? In at least three incidents, groundwater standards are exceeded for compounds detected at elevated levels within the drywell (e.g., 1,1,1-TCA, lead and chromium). Please correct.

17. Section 6: This section lacks consistency. Much of the text is devoted to stating that the site poses no threat to groundwater quality, however, remediation is proposed for several of the drywells. Please explain.

18. Page 6-9: References to New Jersey soil standards are inappropriate for this site. I have enclosed New York State's guidance memorandum which may be used as an aid in determining soil cleanup values.

19. On page 6-7, there is a conflicting statement regarding groundwater quality. It says that no remediation is needed because the "New York State drinking water standards allow concentrations of 1,1,1-TCA up to 5 ppb." However, just prior to this statement is a reminder that TCA was found at 8 ppb. Also, no mention of the lead, chromium or 1-4 dioxane in the groundwater appears in this section. A decision to remediate the site cannot be made without addressing these compounds known to exist in the groundwater.

20. Table 4-7 does not correspond to the TCLP analysis data presented in the appendix; in fact, this table indicates that the tank 16 contents were characteristically hazardous for barium. Please correct and update the text as appropriate.

21. Hydropunch-type sampling should be considered in the immediately downgradient area with the intent of taking groundwater samples at discreet depths so as to ensure the investigation has not simply missed a plume emanating from the site.

22. Some discussion should be added to the text regarding the possible effects upon site hydrology by the pumping of nearby supply wells, as well as the effect of the nearby recharge basin.

Finally, should site conditions warrant it, samples should be obtained from within the recharge basin to determine if site related chemicals have migrated there.

Please feel free to contact me should you wish to discuss any of the above comments.

Sincerely,

Jonathan Greco

Jonathan Greco
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation

Enclosure

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 7010

June 22, 1993

Thomas C. Jorling
Commissioner

Mr. Thomas Taccone
Western NY/Caribbean Section II
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278

Re: Groundwater Flow Direction
Anchor Chemical Site ID No. 130021

Dear Mr. Taccone:

As per your request, I am sending you information on the groundwater flow direction at the General Instruments Corporation site, located on the Northeast corner of the intersection of West John Street and Cantiague Rock Road in Hicksville, New York. The street address is 600 West John Street, very near the Anchor Chemical site, which is at 500 West John Street.

As you can see from the enclosed drawings, the consultant has concluded that shallow groundwater flows in a southward direction, while deep groundwater flows in a southeastern direction. However, the NYSDEC has challenged these assertions and believes the data on Table 3-3 indicates changing flow directions, possibly a result of pumping wells located in the area.

Also enclosed is a similar data package for the Magnusonics Devices, Inc. site, located at 290 Duffy Avenue, Hicksville, New York. Though the map and text I have enclosed here indicate a southeastern flow, it should be noted that another map in the document depicts a southwestern flow.

Based upon the data I have presented, it is apparent that the groundwater flow in the vicinity of the Anchor Chemical site is in need of further definition before it can be conclusively stated that the monitoring well locations were adequate for detecting contaminant releases from the site.

Please contact me at (518) 457-3976 if you would like to discuss this matter further.

Sincerely,

Jonathan Greco

Jonathan Greco
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation

Enclosures
a:ANCHOR.622

600006

The regional groundwater flow on Long Island is separated by a groundwater divide which trends east/west along the north-central portion of Long Island (Figure 3-14). All groundwater north of the divide discharges into Long Island Sound, and all groundwater south of the divide discharges into Great South Bay (Kilburn, 1979).

B. **Local Hydrogeology.** Local hydrogeology is consistent with the regional profile. A major difference is that the Port Washington hydrogeologic units are absent in the immediate vicinity of the site. In the Hicksville area, the upper glacial aquifer rests unconformably on the Magothy aquifer. This relationship causes an increased hydraulic communication between the two due to the absence of any laterally continuous confining layer.

The Hicksville area is located just south of the regional groundwater divide; therefore, it is primarily a recharge area. Recharge is through the upper glacial aquifer, which is highly permeable and has a high hydraulic conductivity. Groundwater flow is to the south (Smolensky and Feldman 1988). The general southerly slope of the hydrogeologic units reinforces the southward flow of groundwater (Figure 3-14).

C. **Site Hydrogeology.** The General Instrument Corporation facility in Hicksville, New York, is located in the glacial outwash plain described in Section 3.5B. The site overlies the upper glacial aquifer, which in turn directly overlies the Magothy aquifer. Local groundwater flow is generally to the south. The site is paved; however, unpaved areas surround the site. On-site catch basins provide the only on-site recharge to the underlying sediments. The water table is approximately 60 feet below the ground surface.

1. **Groundwater Elevation/Flow Direction.** Depths to groundwater in the on-site monitoring wells were measured and recorded for six points in time: September 1990, November 1990 (twice), March 1991, April 1991, and May 1991. Additionally, long-term groundwater level monitoring was undertaken for approximately 30 days in the following well couplets: W-3-72 and W-3D-120, W-10-71 and W-10D-120, and W-12-70 and W-12D-120.

The depths to groundwater, well identification, measuring point elevation, and date measured are presented in Table 3-3. The groundwater elevations were used to construct groundwater elevation/flow direction diagrams. Groundwater flow directions varied little during the four periods of water level measurements; therefore, the groundwater flow diagram for May 1991 is representative of the overall flow directions and is presented in Figures 3-15 and 3-16.

a. **Shallow Aquifer (0-10 feet below the water table).** The groundwater elevation varied consistently (approximately 0.5 foot over the entire site). The gradient was consistent

from month to month (0.001 feet/foot). The direction of groundwater flow did not vary from month to month (basically south-southwestward).

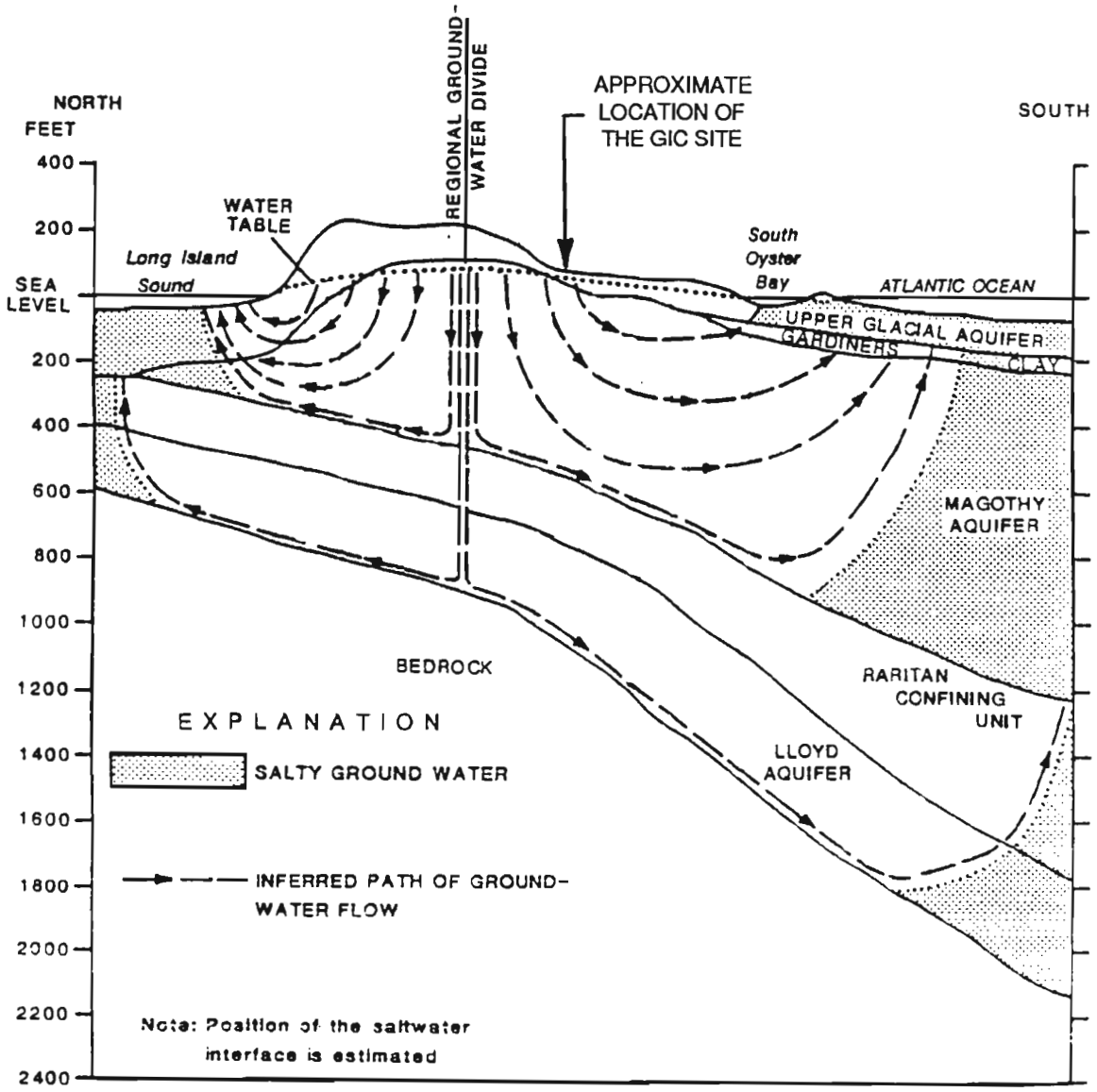
b. **Deeper Aquifer (60-70 feet below the water table).** The groundwater elevation measurements made in five on-site deep wells indicate a slightly different flow direction from that of the shallow aquifer. Groundwater in the deeper aquifer appears to be flow in a south-southeastward direction.

2. **Hydraulic Conductivity/Groundwater Flow Rates.** The in-situ hydraulic conductivity (K) or permeability of the material underlying the site was evaluated by slug testing in 11 on-site monitoring wells on November 6 and 7, 1991. Seven of the 11 monitoring wells are screened across the water table in fine-to-coarse sand. The remaining four monitoring wells are screened deeper in the aquifer from 60 to 70 feet below the water table. Two of the four deep monitoring wells, W-1D-120 and W-3D-112, are screened in fine-to-coarse sand. The other two deep monitoring wells, W-10D-120 and W-12D-120, are screened in fine sand.

The results of the slug tests are included as Appendix H and presented in Table 3-4. The hydraulic conductivity values calculated for the seven shallow wells varied from 2.4×10^{-3} cm/sec to 4.8×10^{-2} cm/sec , with a geometric mean of 1.01×10^{-2} cm/sec. The hydraulic conductivity values calculated for the four deep wells varied from 4.10×10^{-4} cm/sec (1.27×10^{-5} ft/sec) to 1.23×10^{-2} cm/sec (4.04×10^{-4} ft/sec). Ranges of hydraulic conductivity values for common rocks and unconsolidated deposits have been compiled by Freeze and Cherry (1979). Common hydraulic conductivity values for silty sand range from 10^{-5} to 10^{-1} cm/sec, and hydraulic conductivity values for clean sand range from 10^{-3} cm/sec to 1 cm/sec. The hydraulic conductivities obtained for the on-site materials agree with these published ranges for silty to clean sand.

The hydraulic conductivities measured in the shallow wells are slightly lower than the values estimated for the upper glacial aquifer of 320 to 562 feet/day by aquifer tests performed at East Meadow, New York (Prince and Schneider, 1989). The aquifer test area is located approximately two miles south of the GIC facility. Hydraulic conductivity values for the upper glacial aquifer have been estimated as approximately 270 feet/day (Franke and Cohen, 1972).

A pumping test was performed on W-1-75 and W-2D-120 by BCM in May 1982. Hydraulic conductivity values were calculated based on five specific capacity tests, three on W-1-75 and two on W-2D-120. W-1-75 is presumably screened in fine-to-coarse sand. W-2D-120 is presumably screened in fine-to-coarse sand. Boring logs and well completion details were not available for



Stearns & Wheler
ENVIRONMENTAL ENGINEERS & SCIENTISTS

DATE: 9/91 JOB No.: 1623

GENERAL INSTRUMENT CORPORATION
600 WEST JOHN STREET, HICKSVILLE, N.Y.

FIGURE 3-14
REGIONAL
GROUNDWATER FLOW
Ref: MODIFIED FROM SMOLENSKY AND FELDMAN, 1988

600009

TABLE 3-3
SUMMARY OF WATER LEVEL MEASUREMENTS

		9/27/90	9/27/90	11/6/90	11/6/90	11/13/90	11/13/90	3/25/91	3/25/91	4/30/91	4/30/91	5/3/91
Well ID	Well Elev.	DTW	GW Elev.	DTW	GW Elev.	DTW	GW Elev.	DTW	GW Elev.	DTW	GW Elev.	DTW
W-1-75	140.87	59.95	80.92	59.39	81.48	59.40	81.47	59.5	81.37	59.72	81.15	59.46
W-1D-120	140.32	59.38	80.94	58.85	81.47	60.00	80.22 **	58.61	81.71	58.88	81.44	58.95
W-2-71	140.29	59.41	80.88	58.88	81.41	58.90	81.39	58.62	81.67	58.93	81.36	58.85
W-2D-120	143.02	*	*	61.58	81.44	60.00	83.02	62.15	80.87	61.94	81.08	61.7
W-3-72	143.34	62.35	80.99	61.67	81.67	61.78	81.56	61.93	81.41	62.02	81.32	61.82
W-3D-112	143.54	62.64	80.90	61.91	81.63	62.00	81.54	62.13	81.41	61.65	81.89 **	62.02
W-5-78	142.17	61.60	80.57	*	*	61.03	81.14	61.09	81.08	61.19	80.98	61.02
W-6-79	141.54	60.99	80.55	*	*	60.51	81.03	60.49	81.05	60.68	80.86	60.41
W-7-71	142.00	61.01	80.99	60.10	81.90	60.56	81.44	60.64	81.36	60.88	81.12	60.61
W-8-71	142.28	61.32	80.96	60.46	81.82	60.74	81.54	60.88	81.40	61.11	81.17	60.84
W-9-71	141.21	60.93	80.28	59.69	81.52	59.90	81.31	59.71	81.50	59.94	81.27	59.88
W-10-71	139.44	58.94	80.50	58.31	81.13	58.65	80.79	58.6	80.84	58.86	80.58	58.45
W-10D-120	140.50	59.79	80.71	59.14	81.36	59.41	81.09	58.86	81.64	59.61	80.89	59.23
W-11-70	140.16	59.56	80.60	58.90	81.26	58.89	81.27	59.11	81.05	59.33	80.83	58.95
W-12-70	139.27	58.57	80.70	58.00	81.27	58.28	80.99	58.26	81.01	58.4	80.87	58.3
W-12D-120	139.64	58.97	80.67	58.23	81.41	58.51	81.13	58.52	81.12	58.88	80.76 **	58.67

Ground water elevations are presented as feet above mean sea level.

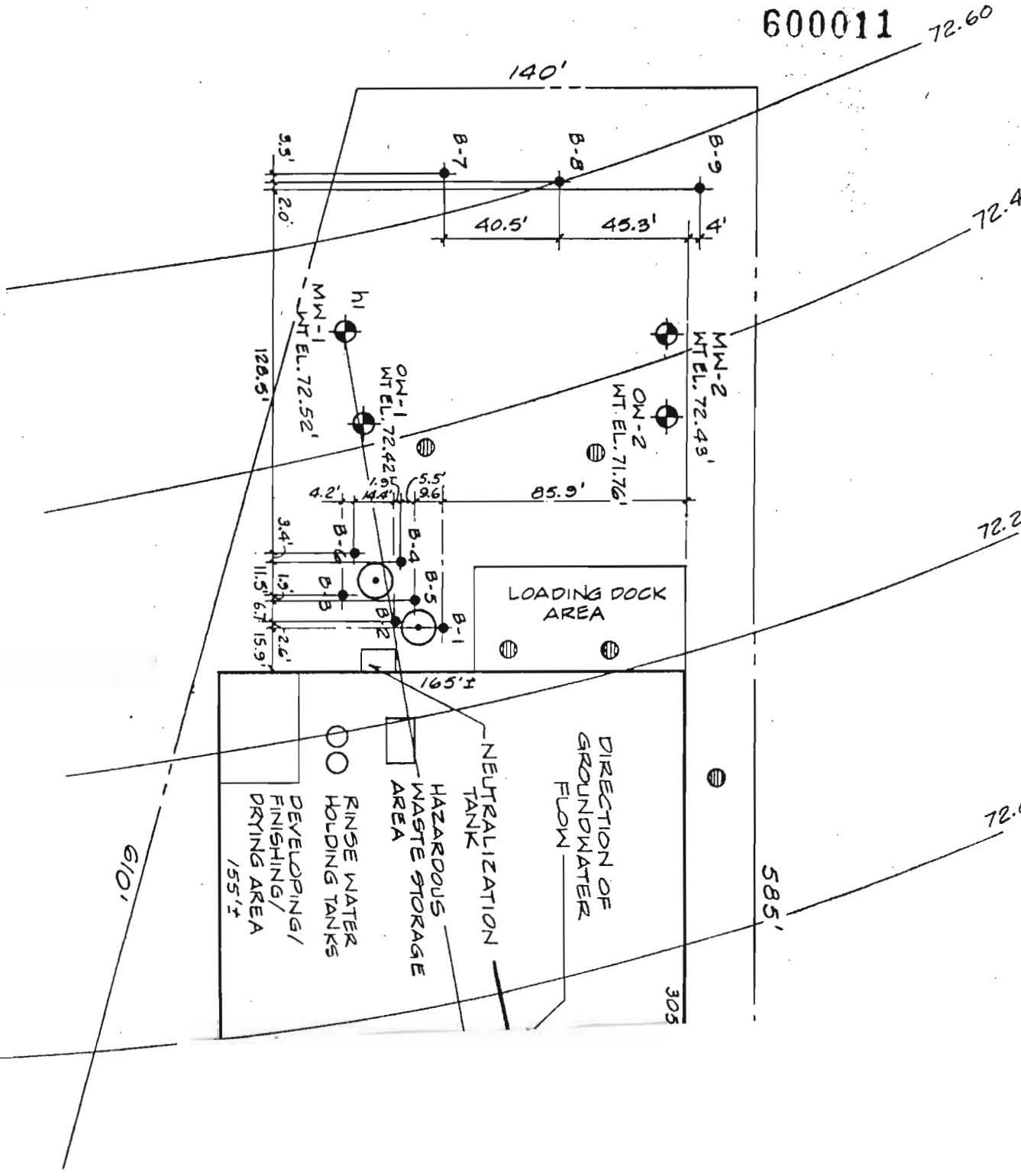
* No measurement taken.

** Data points considered as innaccurate and not representative of water levels. Probable cause: condensation in casings giving false readings. Values do not correspond to water level trends indicated in other wells.

PHASE II INVESTIGATION

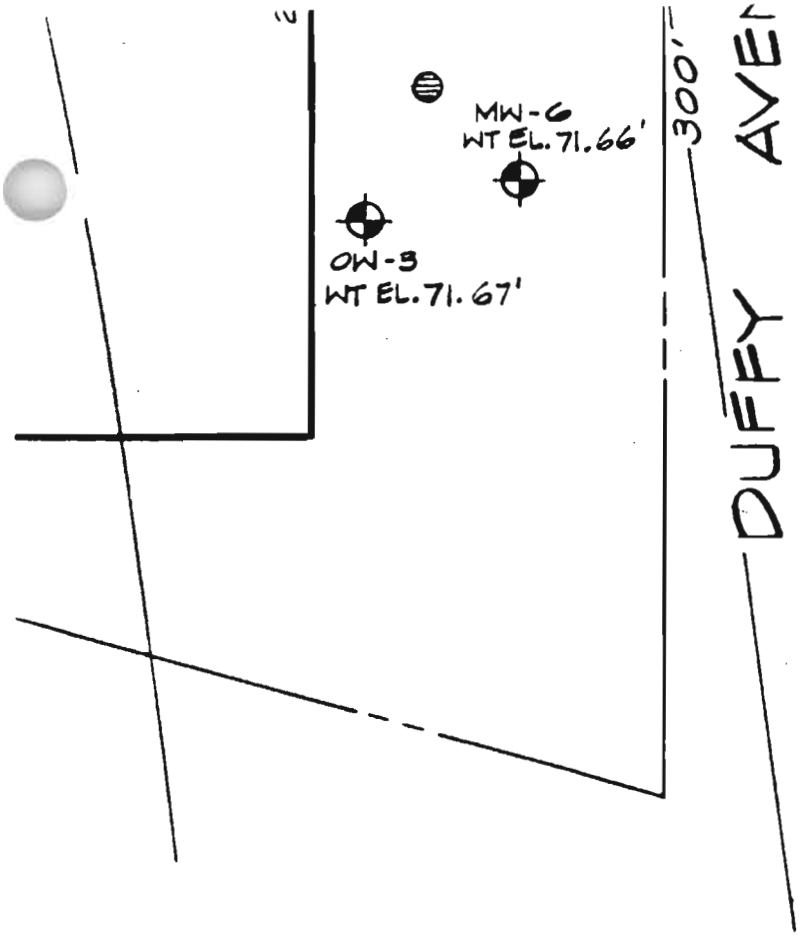
MAGNASONIC DEVICES, INC.

600011



PLAN

1" = 40'



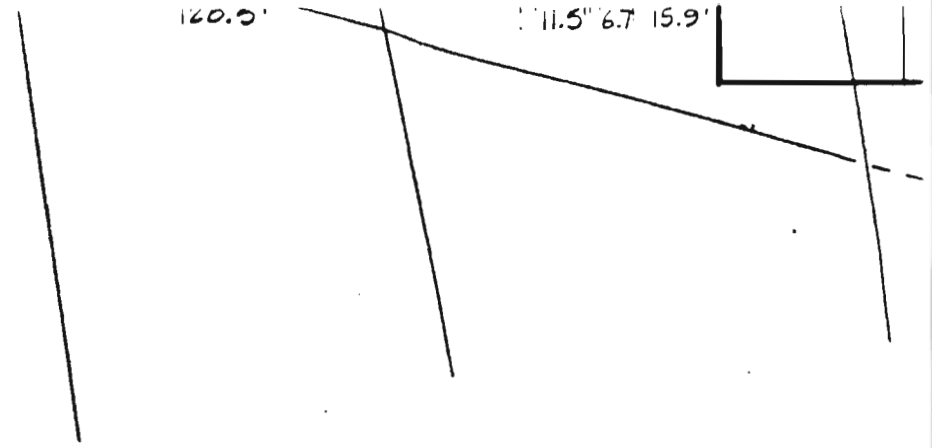
GROUNDWATER CONTOUR MAP
UPPER GLACIAL AQUIFER

MAGNUSONIC DEVICES INC.
290 DUFFY AVE., HICKSVILLE, N.Y.

RICHARD D. GALLI P.E.,P.C.
52 BROADWAY - GREENLAWN, NY 11740

DR AXC CKD TF APPD RDG	SCALE AS SHOWN DATE 5-9-89	FIGURE NO. 6.3

600012



LEGEND

72.60	WATER TABLE CONTOUR LINE (VALUES IN FEET)
OW-1 WT EL.	OBSERVATION WELL (WATER TABLE ELEVATION)
MW-1 WT EL.	MONITORING WELL (WATER TABLE ELEVATION)
B-1	EXPLORATORY BORING
	LOCATION OF PAST DISCHARGE OF WASTE WATERS
	LOCATION OF STORM DRAIN

NOTE: ALL ELEVATIONS TO NASSAU COUNTY DATUM

600013

TABLE 6.8 - Water Table Elevation Data

Well I.D.	*Elevation of Top of Well Casing	*Elevation of Water Table (ft) Well/Date:			
		[a]3/14/89	+3/27/89	4/11/89	+5/9/89
MW-1	131.38	71.96	71.71	71.96	72.52
MW-2	131.29	71.92	71.79	71.97	72.43
MW-3	132.43	71.24	71.27	71.45	71.83
MW-4	132.08	71.21	71.24	71.32	71.73
MW-5	131.98	71.13	71.06	71.25	71.66
MW-6	131.72	71.15	71.11	71.26	71.66
OW-1	131.17	71.53	71.68	71.93	72.42
OW-2	131.07	71.49	71.76	71.90	72.30
OW-3	131.83	70.91	71.10	71.25	71.67
OW-4	131.97	70.91	71.02	71.27	71.61

* To Nassau County Datum
+ Groundwater Contour Map
a The observation well measurements collected on 3/14/89 were measured from the top surface of the well manhole, the elevation of each manhole cover (top) is as follows: OW-1=131.70 : OW-2=131.52 ; OW-3=132.11 ; OW-4=132.14

6.5 SITE HYDROLOGY

Located south of the regional groundwater divide of Long Island, groundwater flows in a southerly direction within the underlying aquifers of the Magnusonic Devices site. Pleistocene deposits are 100 to 125 feet in thickness below the subject site (see Figure 5.1). Depth to groundwater is approximately 60 feet below grade, making the saturated thickness of the Upper Glacial aquifer at the subject site 30-55 feet. The actual contact between Pleistocene and Upper Cretaceous deposits, comprising sediments of the Magothy aquifer, is poorly defined within the Hicksville area (C. Kilburne K. Krulikas, 1980). All confining units separating the Upper Glacial and Magothy aquifers, primarily the Gardiners Clay and the "20 foot Clay", "pinch-out" or are discontinuous within the Hicksville area of Nassau County. The two aquifers are in direct contact, but hydraulic communication between the aquifers is limited due to the anisotropic* character of both aquifers and the small difference in pressure head from one aquifer to the next.

The subject site is just south of the area of Long Island termed the Deep Recharge Zone, though recharge of underlying aquifers occurs to some degree within the Hicksville area.

*anisotropic: The horizontal stratification of both Pleistocene and Cretaceous sediments creates the condition of having greater horizontal movement of groundwater than vertical, see Section 6.4.

Depth to water measurements were recorded periodically in both monitoring wells and observation wells on the Magnusonic Devices site. Well measurements were recorded to the nearest one-hundredth of a foot using a Sonic Well Depth Indicator, Model DR-759, manufactured by Soil Test, Inc. All measurements are from the top of each well casing/riser pipe at a designated point. Each designated measuring point was surveyed to Nassau County Datum, and elevations are given in Figure 1.1. Table 6.7 includes all depth-to-water measurements recorded since March, 1989.

A trend in decreasing depth to water can be observed from the month of March to the month of May. The rise of the local water table is the result of the above average precipitation in the months of April and May, 1989.

Two groundwater contour maps of the Upper Glacial aquifer (see Figure 6.2, 3/27/89 Groundwater Contour Map, Figure 6.3, 5/9/89, Groundwater Contour Map) were developed for the subject site using water table elevation values calculated from the recorded depth-to-water measurements at the ten (10) site wells, see Table 6.8.

Within an unconfined aquifer, water table contour lines also represent the potentiometric (potential energy head) surface of the represented aquifer. Direction of groundwater flow is perpendicular to the water table contour lines/potentiometric surface contour lines. Using the developed groundwater contour maps, horizontal direction of groundwater flow within the Upper Glacial aquifer is determined to be in a south to south-east direction through

the Mangusonic Devices site. Direction of flow was calculated at 183° from magnetic north using Figure 6.2, essentially due-south. Figure 6.3 indicates direction of flow being south-southeast, 170° from mangetic north. A south to south-east direction of groundwater flow is consistent with regional flows for the Upper Glacial aquifer within the Hicksville area of Nassau County. After determining the flow direction of groundwater, the hydraulic gradient of the unconfined aquifer can be determined graphically from the groundwater contour map. Using the groundwater contour maps for the subject site, hydraulic parameters discussed previously, and a modified form of the Darcy* Equation for groundwater flow velocity, an estimated value for groundwater velocity of the Upper Glacial aquifer, can be calculated for the subject site. The modified Darcy Equation is as follows:

$$Va = \frac{kI}{n} \text{ where}$$

Va = Groundwater Velocity (Horizontal)

I = Hydraulic Gradient

n = Porosity of Sediments

k = Hydraulic conductivity of Aquifer

Hydraulic gradients of 0.0016 and 0.0018 ft/ft were calculated for the Upper Glacial aquifer within the subject site using Figures 6.2 and 6.3 respectively. These hydraulic

*Franke & Philip, USGS Prof. Paper 800-C

gradients compare favorably with the values calculated in several USGS groundwater studies conducted on Long Island within outwash plain deposits. Hydraulic gradients of 0.0016 to 0.0021 ft/ft were calculated for several locations within outwash plain deposits, Upper Glacial aquifer, in Suffolk County by Kimmel and Braids, USGS Prof. Paper 1085.

According to laboratory permeability tests completed on soil sample MW-3, 62-64 ft., the sample has an observed porosity of 32% (total volume of sample). This agrees favorably with porosity values of 30% - 40% for medium and coarse grained sands with gravel (Veatch, et al 1906), see section 6.3.

According to laboratory permeability tests completed on soil sample MW-3, 62-64, the sample has an observed hydraulic conductivity of 76.5 ft/day. This is considerably less than the value of 270 ft/day given by Franke & Cohen, 1972, Table 6.5, for typical outwash plain deposits of Long Island, Upper Glacial aquifer.

Sediments encountered at the subject site are generally unsorted with respect to grain size distribution. See Section 6.3. This observed condition is uncharacteristic of sediments typically associated with the outwash plain region of Nassau County. The observed hydraulic conductivity of 76.5 ft/day is consistent with the unsorted sediments encountered at the subject site.

Using the above data and the given equation, **Richard D. Galli, P.E., P.C.** has calculated velocities of 0.38 ft/day to 0.43 ft/day for horizontal movement of groundwater through the subject site.

600018

Vertical movement of groundwater within the Upper Glacial aquifer has been estimated to be at rates of 1/10 to 1/24 of the horizontal component of groundwater flow as discussed in section 5.4. According to the estimated ratios and the calculated horizontal flow rates, vertical flow rates of groundwater can be as much as .152 ft/day or as little as 0.016 ft/day within the Upper Glacial aquifer.

6.6 SITE GROUNDWATER QUALITY

On March 28, 1989, groundwater samples were collected from the six (6) monitoring wells installed at the Magnusonic Devices site in strict accordance with the sampling method given in the approved Field Investigation Workplan and NYSDEC Phase II protocol. The monitoring wells were purged using hand bailers the day prior to the actual sample collection; both procedures were accomplished within the required 24 hour time period. A total of six (6) groundwater samples, one duplicate sample, labeled MW-7, a field blank and trip blank were collected. During the collection of groundwater samples, the NYSDEC representative present "split" groundwater samples from monitoring wells MW-3, MW-4, MW-5.

Laboratory analysis of the site ground water included:

-TCL Metals
-TCL Volatile Organics
-TCL Base Neutrals/Acid Extractables
-Hexavalent Chromium
-Cyanide
-Phenols
-Indicator Parameters
(Nitrate, Chloride, Flouride, etc.)

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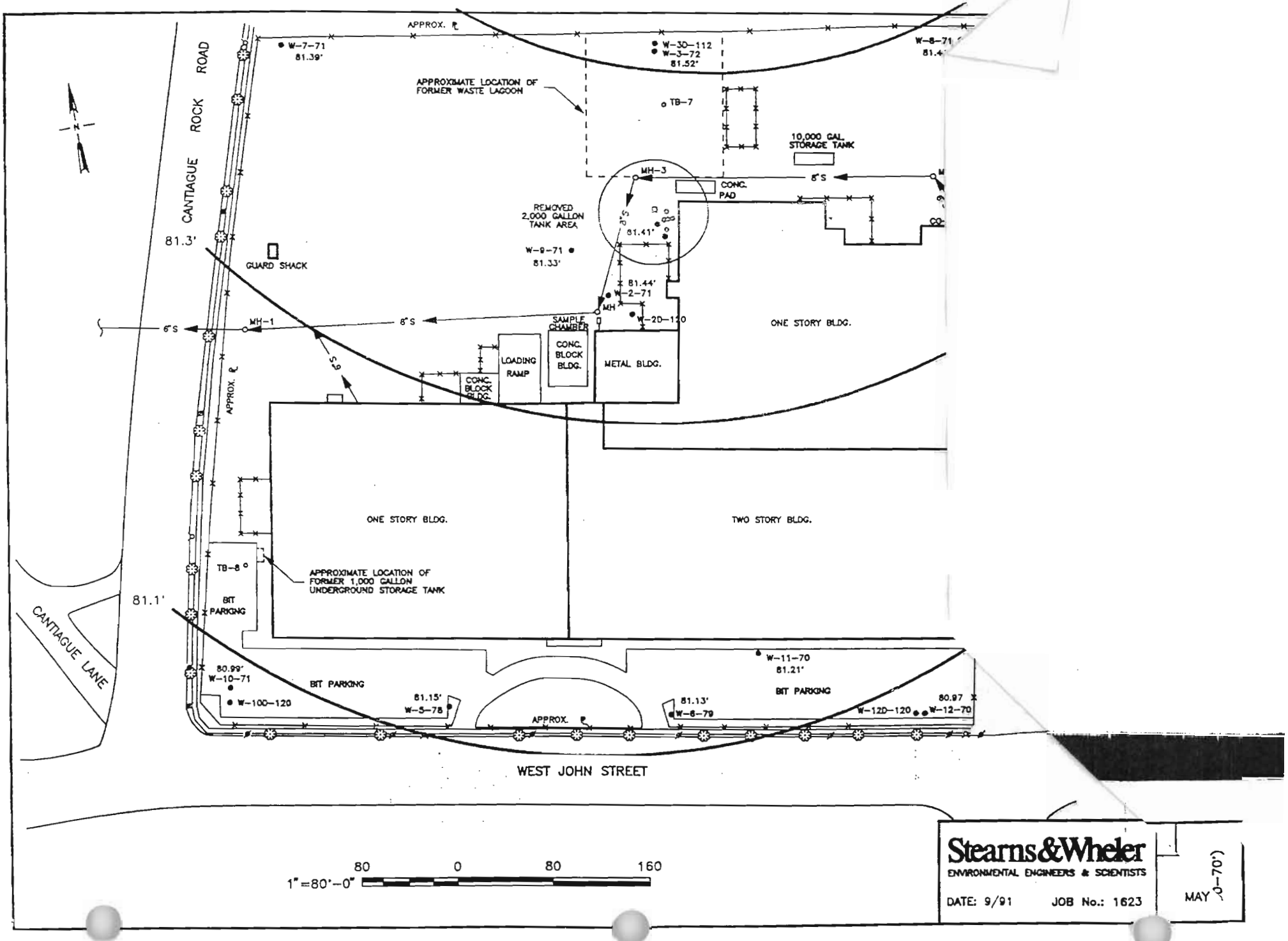

Stearns&Wheler
ENVIRONMENTAL ENGINEERS & SCIENTISTS

DATE: 9/91 JOB No.: 1623

MAY 0-70')

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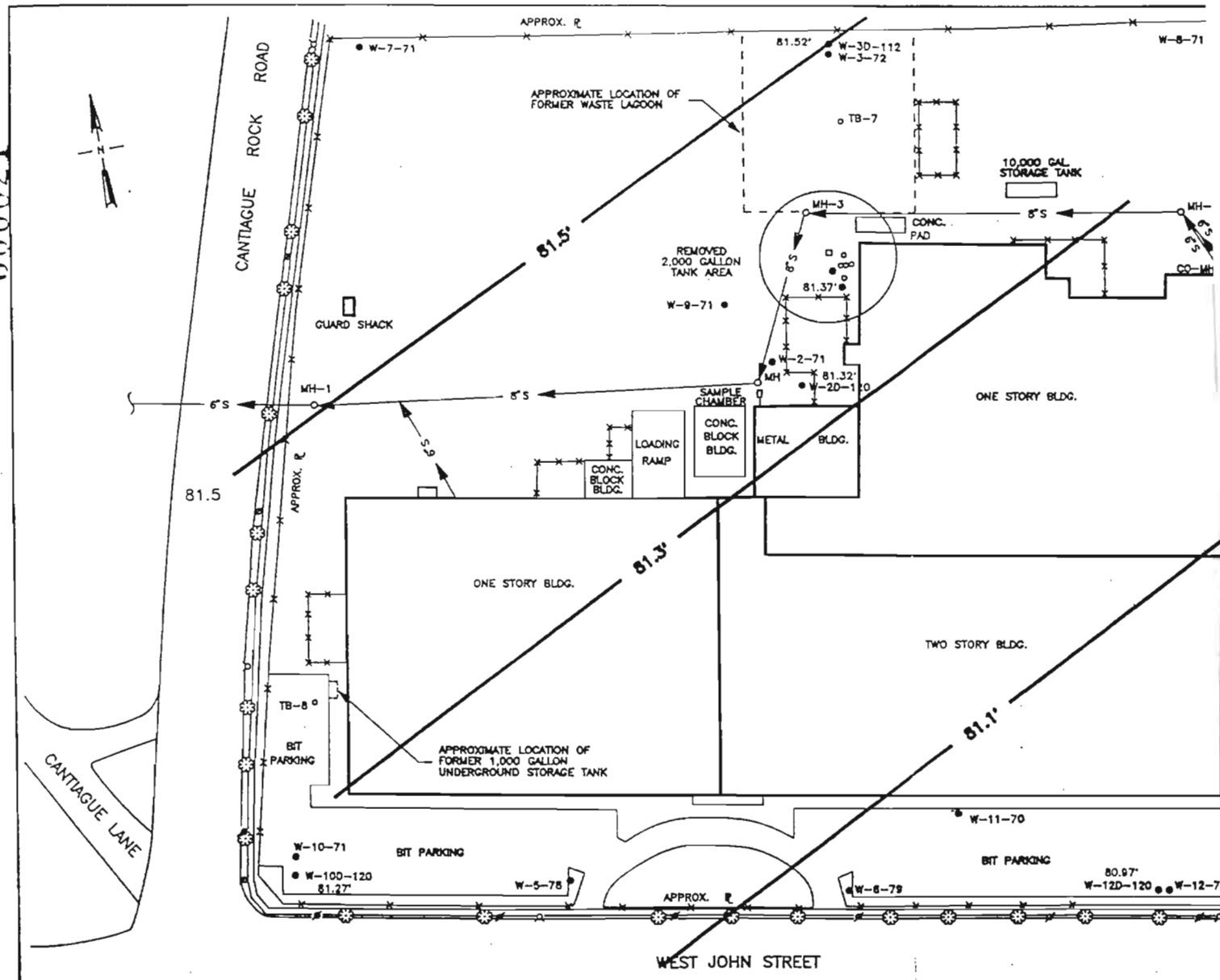

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ENVIRONMENTAL ENGINEERS & SCIENTISTS
DATE: 9/91 JOB No.: 1623

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MAY 1991 (20')

AUG 12 1993

Jonathan Greco
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental
Conservation
50 Wolf Road
Albany, New York 12233

Re: NYSDEC's Comments on the Anchor Chemical Draft RI Report

Dear Mr. Greco:

This is in reply to your letter of June 9, 1993, which transmitted the New York State Department of Environmental Conservation's (NYSDEC) comments on the draft remedial investigation (RI) report for the Anchor Chemical Superfund site. Enclosed is a copy of EPA's comment letter to the PRPs. As you can see from the letter and as I mentioned to you in our telephone conversation of July 27, 1993, most of DEC's comments were sent to the PRPs for response.

Below, are EPA's responses to DEC's comments in the order in which they appeared in your letter.

General

EPA agrees that the report was poorly written with excessive, nonspecific information, which needs to be substantiated.

Specific

Comment 1: Agreed; PRPs will be asked to respond.

Comment 2: According to TRC Environmental, EPA's oversight contractor, the wells were sampled correctly. However, the PRPs were asked to provide the well development and sample dates for each well.

Comment 3: PRPs were asked to revise the report to recognize that acetone and/or methylene chloride could be in the soil and not the result of lab contamination.

Comment 4: The workplan and project plan for the site only

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SYMBOL --->	WNYSII							
SURNAME -->	Taccone							
DATE ----->	8/12/93							

require one cesspool to be sampled. However, EPA agrees that data for both cesspools is necessary; the PRPs will resample.

Comment 5: An additional round of ground water elevation measurements will be taken on August 13, 1993, and should settle any remaining questions regarding ground water flow. Your or another DEC representative's presence is requested while the measurements are taken.

Comments 6 through 8, 10 through 20 and 22: EPA agrees with the comments. PRPs were asked to address them.

Comment 9: PRPs were asked to explain the OVA discrepancies in the soil boring logs. However, no response will be requested regarding a tank which stored 1,4 dioxane. As we discussed over the telephone on July 27, 1993, it was determined that 1,4 dioxane was not stored on site but may be a breakdown product.

Comments 21 and 22: If after the third round of ground water measurements the ground water is found to flow to the southwest, no additional sampling will be necessary. If, however, the data indicates another flow direction, EPA will discuss with the DEC the need for additional sampling.

If you have any additional questions on this matter, please call me at (212) 264-9128.

Sincerely yours,

Thomas Taccone
Project Manager
Western New York Section II

Enclosure

bcc: K. Lynch, ERRD-NYCSB-WNYII
J. Doyle, ORC

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 **7010**

October 5, 1993

Thomas C. Jorling
Commissioner

Mr. Tom Taccone
Western NY/Caribbean Section II
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278

RE: Additional Groundwater Sampling
Anchor Lith Kem Ko ID No. 130021

Dear Mr. Taccone:

As per your request, I am formalizing our earlier telephone conversation wherein I requested further groundwater sampling be conducted at the Anchor Lith Kem Ko site. I make this request based upon the apparent inconsistency between rounds I and II for the analysis of 1-4 dioxane.

As you may recall, 1-4 dioxane appeared in MW-3 at a level of 110 ppb in round I, but was not detected in round II at the same location. Also as we discussed, I believe the 1-4 dioxane to be a break-down product of 2-butoxyethanol, which was known to have leaked from the site.

Though the State reserves its right to possibly request further work pending review of the draft final RI, I feel it is important to request this additional work now, so as not to unnecessarily delay the remedial program. I am specifically requesting that monitoring well MW-3 and at least two others (possibly MW-2 and MW-5S) be resampled and analyzed for the full TCL so as to resolve the issue of conflicting data and to broaden our overall database to aid in the selection of a final remedy for this site.

Please feel free to contact me at (518) 457-3976 if you would like to discuss this matter.

Sincerely,

Jonathan Greco

Jonathan Greco
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation

600024

FILE COPY

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233

7010

November 16, 1993

Thomas C. Jorling
Commissioner

Mr. Tom Taccone
Western NY/Caribbean Section II
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278

Re: Draft Final Remedial Investigation
Anchor Lith Kem-Ko ID No. 130021

Dear Mr. Taccone:

The New York State Department of Environmental Conservation (NYSDEC) has reviewed the referenced document and offers the following comments:

1. General Comment: The report does not answer many of the questions raised in my earlier comments. As we have discussed, it is in our mutual interest to use the data generated during the investigation to come to a decision on how to proceed as opposed to reiterating comments which apparently cannot be answered. Please note that where technical deficiencies were noted in my earlier comments and responses were either inadequate or missing, I have taken a conservative approach and requested resampling to fill data gaps.

2. Table 3-3: Monitoring wells MW-1, 2 & 3 were all developed "prior to sampling" which may indicate a deviation from each of accepted protocols (i.e., the vigorous development procedure may result in a loss of volatiles in samples extracted too soon after the process). This information, coupled with the conflicting data from the two rounds of groundwater sampling regarding certain organic compounds, supports my earlier request for resampling of monitoring wells MW-1, 2 & 3. I will make myself available to observe this sampling effort and will take split samples, as necessary.

3. Figure 4-1 depicts the actual boring locations for the inside boring program. Based upon a review of this new information, I believe it is important that new borings be advanced in the immediate vicinity of tank #4, as the two nearest borings were apparently located ten and twenty feet away from the tank and yet showed moderate levels of the compound which had been stored in that tank, 2-butoxyethanol (a.k.a. butyl cellosolve). Borings placed more closely to the tank may yield information indicative of a large release which should be addressed in the final remedial action at the site.

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4. Section 4.2: The consultant has mistakenly listed the inorganic soils data as ppb, rather than ppm. Moreover, the data is then compared or crosswalk with the NYSDEC groundwater standards. Please have this corrected in the final printing of the RI.

5 General. Throughout the report, positive detections of methylene chloride, acetone and bis (2-ethylhexyl) phthalate are attributed to laboratory extraction/amplification despite the fact that they are seen at levels not exceeding those exhibited in associated quality control samples. Does the USEPA agree with the consultants assertions? This is uniquely important at this site as both MEK and acetone are known to have been used on-site.

6. The description of the indoor boring program sampling efforts is not sufficient. Specifically, how were soil samples selected for analysis handled? Were samples split with one undergoing headspace analysis while the other was used for possible future analysis? If not, what was the sampling practice?

7 The RI cannot be considered complete until the results of the most recent seepage sampling are made available.

Please feel free to contact me at (518) 457-3675 if you would like to discuss this matter.

Sincerely,

Jonathan Greco
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation

bcc: S. Ervolina
M. Chen/File
T. Vickerson, NYSDOH

A:ANCHOR.NYG

600026

TOTAL P.02

Tom

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Center for Environmental Health 2 University Place Albany, New York 12203-3399

Mark R. Chassin, M.D., M.P.P., M.P.H.
Commissioner

Paula Wilson
Executive Deputy Commissioner

OFFICE OF PUBLIC HEALTH
Lloyd F. Novick, M.D., M.P.H.
Director

Diana Jones Ritter
Executive Deputy Director

William N. Stasiuk, P.E., Ph.D.
Center Director

January 21, 1994

Ms. Dorothy Allen
USEPA - Region II
26 Federal Plaza, Room 29102
Jacob J. Javitz Federal Building
New York, NY 10278

RE: Anchor Lith Kemko Site (NYSDEC ID #130021) Hicksville, Nassau County, NY

Dear Ms. Allen:

The New York State Department of Health (NYSDOH) is preparing a Site Review and Update (SRU) for the Anchor Lith Kemko Site in Hicksville, New York. This SRU is being prepared by the NYSDOH under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It requires an extensive review of documents about the investigation and remediation of the site. NYSDOH has the following documents to review for the Anchor site:

Anson Environmental Ltd. Remedial Investigation Report, Vol. 1-4. Anchor Chemical Site, Hicksville New York. September 1993.

TRC Environmental Corporation. Draft Risk Assessment Anchor Chemical Site, Hicksville, New York, Work Assignment C02125. October 18, 1993.

NYSDOH, Bureau of Environmental Exposure Investigation. Preliminary Health Assessment Anchor Lith Kemko, Hicksville, Nassau County, New York. August 1988.

Lockwood, Kessler, Bartlett, Inc. 1985, Engineering Investigation Anthor Lith Kem-Ko.

NYSDEC, 1983, Woodward-Clyde Consultants Inc., Phase I Preliminary Investigation Anchor Chemical Site.

Nassau County Department of Health, Bureau of Public Water Supply, Test Well Analytical Data, September 1982.

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Please advise me as soon as possible if there are any other documents which should be included in our review.

Should you need to contact me, I can be reached at (518) 458-6405.

Sincerely,

Michael J. Hughes
Environmental Health Specialist II
Bureau of Toxic Substance Assessment

94018PR00055

cc: Dr. N. Kim
Dr. G. Carlson
Mr. S. Bates
Mr. C. Hudson
Ms L. Lutzker, Nassau Co. H.
Mr. G. Ulrisch - ATSDR (Atlanta)
Mr. A. Block/Mr. S. Jones - ATSDR (NYC)
Mr. B. McCabe - USEPA ✓
Mr. M. Chen/Mr. J. Greco

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7010

June 6, 1994

Langdon Marsh
Acting Commissioner

Mr. Thomas Taccone
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278-0012

Dear Mr. Taccone:

Re: Dean Anson's May 31, 1994 Response to Comments on RI;
Anchor Lith Kem-ko Site (ID #130021)

I have reviewed Mr. Anson's May 31, 1994 letter and offer the following comments:

1) Mr. Anson's response to your Comment #44 indicates he may have missed the point. The comment requested that data from "Westbury" be removed from this report because it was of no relevance. The fact that the data was of CLP approved quality is unimportant.

2) Mr. Anson's response to the USEPA's request for additional soil borings is incorrect. 2-Butoxyethanol, a.k.a. Butyl Cellosolve or ethylene glycol monobutyl ether, is a CERCLA hazardous substance as it is a glycol ether. Glycol ethers are referenced as a whole (i.e., the entire class of compounds is referenced) under Section 313 of SARA, and is, therefore, subject to Superfund investigation (see pages 2 and 30 of the Title III List of Lists, EPA publication no. 560/4-91-011).

⇒ In Hurst Tables — CAS # 111762

3) Mr. Anson's assertion that even if 2-Butoxyethanol were present beneath the building, it would not "...'spread' as there are no liquids flowing through the soils under the building." is unsubstantiated and, moreover, premature. Obviously, a release of sufficient magnitude would ultimately migrate downward to the water table and subsequently be transported off-site. The purpose of further investigation is to determine if a release of this size has occurred.

4) Mr. Anson's response to the USEPA's request for additional groundwater sampling based upon the presence of 1-4 dioxane is incorrect. 1-4 dioxane is a hazardous substance under CERCLA as it is referenced under Section 313 of SARA as well as being a RCRA hazardous waste (U108).

In conclusion, the NYSDEC asks that the USEPA stands firm upon its request to the potentially responsible party for the additional work referenced above.

To: Tom Taccone
From: Jon Greco
1 Pg

Sincerely,

Jonathan Greco

Jonathan Greco
Engineering Geologist I
Bureau of Eastern Remedial Action
Div. of Hazardous Waste Remediation

600029

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7010

Michael D. Zagata
Commissioner

May 2, 1995

Mr. Tom Taccone
Western NY/Caribbean Section II
U.S. Environmental Protection Agency
Region II
290 Broadway
New York, NY 10007-1866

Re: Future Actions at the Anchor Lith Kem Ko ID No. 130021

Dear Mr. Taccone:

I am responding to your verbal request for my position on the USEPA's proposed future course of action to be taken at the Anchor Chemical site. Specifically, you had stated that the USEPA is considering directing the potentially responsible parties (PRPs) to remove the contaminants detected in four on-site drywells, and following that action, issuing a "no further action" record of decision (ROD).

While I believe this proposal of action may be acceptable to the NYSDEC, there are some details which must be worked through, most notably, whether future groundwater monitoring would be required. As I stated in our conversation, the most recent round of soil sampling does not indicate any new sources of large-scale contamination; however, the groundwater samples taken during the same time period show a significant increase in contamination in monitoring well MW-5S (concentrations of trichloroethane at 29 ppb and approximately 300 ppb of unknown compounds). A comparison of these levels with those of past samples show wide fluctuations, and this forces the conclusion that at a minimum, a monitoring watch of the groundwater must be maintained.

Groundwater monitoring should be implemented following the removal of drywell 2 and the three other on-site drywells, since applicable standards have been violated and the efficacy of the remedy should be confirmed prior to concluding that the site should be delisted and/or dismissing the CERCLA five-year review.

Please contact me at (518) 457-3976 if you would like to discuss this matter.

Sincerely,

Jonathan Greco

Jonathan Greco
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation

600030

JUN 0 9 1995

EXPRESS MAIL

Sal Ervolina, Director
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation
NYS Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Re: Draft Proposed Plan; Anchor Chemical Site

Dear Mr Ervolina:

Enclosed please find the draft Proposed Plan for the Anchor Chemical Superfund Site, located in Hicksville, New York. The Proposed Plan has been compiled by EPA subsequent to the completion of the Risk Assessment and Remedial Investigation Reports. EPA requests that the NYSDEC review the draft Proposed Plan and forward any comments to Tom Taccone, the Anchor Chemical Project Manager, by June 30, 1995.

Thank you in advance for your cooperation. If you have any questions on this matter, please contact me or have your staff contact Mr. Taccone at (212) 637-4281.

Sincerely yours,

Carole Petersen, Chief
New York/Caribbean Superfund Branch II

Enclosure

cc: J. Greco, NYSDEC

bcc: J. Doyle, ORC- NYCSFB

600031

SYMBOL --->	MNYS2	MNYS2	NYCSB2					
SURNAME -->	TACCONE	LYNCH	PETERSEN					
DATE ----->		6/6/95	6/6/95					

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Albany, New York 12233

JUL -7 1995

Michael D. Zagata
Commissioner

Ms. Kathleen Callahan
Director
Emergency & Remedial Response Division
U.S. Environmental Protection Agency
Region II
290 Broadway
New York, NY 10007-1866

Re: Anchor Chemical Site ID No. 130021
Proposed Plan

Dear Ms. Callahan:

The New York State Department of Environmental Conservation (NYSDEC), in conjunction with the New York State Department of Health (NYSDOH), has reviewed the proposed for the Anchor Chemical site and concur with the no further action decision contingent upon the successful completion of the proposed removal of four on-site drywells.

It should be noted that both the NYSDEC and the NYSDOH support groundwater monitoring following the removal for the following reasons:

1. Groundwater standards have been significantly contravened for chromium (1,150 ppb), lead (74 ppb), trichloroethane (29 ppb) and tentatively identified compounds (293 ppb).

2. Historic levels of contamination (as high as 24 ppm of TCA in groundwater) indicate that a significant release occurred.

3. Storage of large amounts of chemical products in underground storage tanks occurred from 1964 through 1985, and several of these tanks are known to have failed leak tests.

4. A hazard index (HI) greater than one has been calculated for the site indicating present contaminant levels are a potential hazard under certain future use scenarios. While the proposed removal action is expected to abate this threat, it is important that monitoring is continued after the action to show its effectiveness.

My staff will be available for consultation regarding the specific analytical parameters, duration and sampling frequency of the groundwater monitoring program we are requesting.

Please contact Mr. Jonathan Greco, of my staff, at (518) 457-3976 with any questions regarding this matter.

Sincerely,

Michael J. O'Toole, Jr.
Director
Division of Hazardous Waste Remediation

600032

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Albany, New York 12233

July 10, 1995

Michael D. Zagata
Commissioner

Mr. Tom Taccone
Western NY/Caribbean Section II
U.S. Environmental Protection Agency
Region II
290 Broadway
New York, NY 10007-1866

Re: Technical Comments on Proposed Plan - Anchor Chemical Co. Site ID No. 130021

Dear Mr. Taccone:

Per your request, I am confirming our telephone conversation regarding editorial/ technical comments on the proposed plan for the Anchor Chemical site. The State's acceptance letter for this plan will be sent under separate cover in the near future.

1. **Page 2; right hand column, paragraphs 4 & 6:** Paragraph 4 states that the nine drywells were installed for the purpose of rainwater collection, while paragraph 6 discusses the sealing of all pipelines from the building to the drywell. The latter paragraph implies the drywells had a function other than rainwater collection (e.g., industrial discharge). I suggest adding this to the description in paragraph 4.

2. **Page 3; left hand column, paragraph 4:** The word "extend" should be changed to "extent".

3. **Page 3; right hand column, paragraph 4:** It is stated that "minimal levels of organic contaminants were detected...", however, it should be stated that several compounds did exceed their applicable standard:

   - Trichloroethane was detected at 29 ppb while the NYS Class GA standard is 5 ppb (see 6 NYCRR Part 703)
   - Bis(2-ethylhexyl)phthalate was detected at 160 ppb while its NYS Class GA standard is 50 ppb (see 6 NYCRR Part 703)
   - Tentatively Identified Compounds were detected at 307 ppb while the NYS Class GA standard is 50 ppb for any individual "unspecified organic compound" (VOC) and 100 ppb for any group of VOCs (see 6 NYCRR Part 703; Unspecified Organic Compounds)

4. **Page 4; bottom of paragraph 1; left hand side:** Please add that levels of TICs and trichloroethane in the groundwater may also decrease following the removal action.

Please contact me at (518) 457-3976 if you have any questions.

Sincerely,

Jonathan Greco /mc.

Jonathan Greco
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation

600033

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

IN THE MATTER OF ANCHOR CHEMICAL K.B. Co., Respondent. Proceeding under Sections 104 and 122 of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9604, 9622.	ADMINISTRATIVE ORDER ON CONSENT Index No. II CERCLA-90208

I. JURISDICTION

1. This Administrative Order on Consent ("Consent Order") is issued to the above-captioned Respondent (hereinafter referred to as "Respondent") pursuant to the authority vested in the President of the United States under Sections 104(a) and (b), 122(a) and (d)(3) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 ("CERCLA"), 42 U.S.C. §§9604(a), 9604(b), 9622(a), 9622(d)(3), which authority was delegated to the Administrator of the United States Environmental Protection Agency ("EPA") by Executive Order 12580, dated January 23, 1987, and duly redelegated to the Regional Administrators of EPA. Notice of this Consent Order and the negotiations preceding its issuance were provided to the New York State Department of Environmental Conservation ("NYSDEC").

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

2. The Anchor Chemical Corporation site ("Site") is approximately 1.5 acres in size and is located at 500 West John Street in Hicksville, Nassau County, New York. The Site includes a building where chemical blending and packaging operations were conducted.

3. The Site constitutes a facility, as defined in Section 101(9) of CERCLA, 42 U.S.C. §9601(9).

4. The Site is included on the National Priorities List ("NPL") of known or threatened releases of hazardous substances,

codified at 40 CFR Part 300, Appendix B, as established pursuant to Section 105(a)(8)(B) of CERCLA, 42 U.S.C. §9605(a)(8)(B).

5. The Site is currently owned by K.B. Co., a New York partnership, and was formerly owned by Kobar Construction, Inc. ("Kobar"), a corporation which was organized and existing by virtue of the laws of the State of New York.

6. In 1978, Anchor Chemical Corporation was purchased by Chessco Industries, Inc., and is now known as Anchor/Lith Kem-ko (which is owned by Chessco). Between the years of 1964 and 1984, Anchor/Lith Kem-ko and its predecessor, Anchor Chemical Corporation (hereinafter referred to as "Anchor"), were the only lessees and operators at the Site and engaged in the blending and packaging of chemicals for the graphic arts industry. Such activity and the related office support have been the only known activity conducted at the Site.

7. Documentation from inspections conducted at the Site in 1977 by the Nassau County Department of Health ("NCDH") as well as meetings between Anchor and NCDH indicate that spillage of chemicals during the production mixing and deliveries contaminated a drywell at the Site. Water samples taken on July 27, 1977 from the drywell at the north end of the Site contained concentrations of 1,1,1-trichloroethane at 2,500 parts per billion ("ppb"), trichloroethylene at 15,000 ppb, and tetrachloroethylene at 20,000 ppb.

8. On August 6, 1981, in response to a notice of violation issued by the Nassau County Fire Marshal's ("NCFM") office in May of 1981, fourteen of the seventeen (17) underground storage tanks at the Site were tested using the "air over product" procedure. The aforementioned storage tanks have storage capacities ranging from 550 to 4000 gallons and are buried two feet below grade within the building at the Site. The results of the tests indicated that five of the fourteen tanks tested were leaking. At or about the time of the tests, the five tanks found to be leaking were used to store naphthol spirits, acetone, mineral spirits, isopropyl alcohol, and textile spirits. The three remaining tanks at the Site contained methylene chloride, diethylene glycol, and 1,1,1-trichloroethane, but they were not tested because said materials are not flammable and therefore were not within the jurisdiction of NCFM. Upon NCDH request, however, Anchor tested the three remaining tanks on December 12 and 14, 1982, and the tank containing methylene chloride was found to be leaking.

9. Records available to EPA depicting the chemical storage tanks at the Site as of 1965 and as of February 4, 1975, show that 1,1,1-trichloroethane was stored in one of the five tanks which were identified as leaking during the NCFM tests conducted on August 6, 1981.

10. In 1982, Anchor retained Lockwood, Kessler and Bartlett, Inc. ("LKB"), a consulting engineering firm, to install three monitoring wells and conduct periodic groundwater monitoring of said wells at the Site. Soil samples collected during the well installation and analyzed by NCDH indicated the presence of methylene chloride and 1,1,1-trichloroethane in the soil.

11. Sampling and analysis of the groundwater from the three monitoring wells was performed by the NCDH in September 1982. NCDH's analysis of samples from monitoring well #1 ("MW#1"), located in the northeast area of the Site, indicated the following compounds above 5 ppb in concentration: (a) methylene chloride, (b) 1,1-dichloroethylene, (c) 1,1-dichloroethane, (d) 1,1,1-trichloroethane, (e) trichloroethylene, and (f) tetrachloroethylene. NCDH's analysis of samples from monitoring well #2 ("MW#2"), located in the southeast area of the Site, and monitoring well #3 ("MW#3"), located in the southwest area of the Site, indicated the same compounds as stated above, also at concentrations in excess of 5 ppb. In addition, they indicated 1,2-dichloroethylene, chloroform, and 1,2-dichloroethane in concentrations above 5 ppb. Concentrations of 1,1,1-trichloroethane as high as 11,000 ppb were indicated in analyses of samples from MW#3. These levels were confirmed during a second round of sampling by NCDH which was conducted on December 14, 1982.

12. LKB analyzed groundwater samples from MW#1, MW#2, and MW#3 on several occasions, including December 1982, June 1983, January, July, and November of 1984, and February 1985. The December 1982 analyses confirmed the NCDH sampling results. Sampling results subsequent to the December 1982 have indicated that contaminant concentrations recorded from the three wells at the Site have decreased over time.

13. On October 27, 1987, Roux Associates, Inc. ("Roux"), a firm of consulting groundwater geologists and engineers engaged by Kobar, conducted groundwater sampling at the Site. The analysis of these samples indicated the presence of 1,1,1-trichloroethane and xylene at concentrations of 21.2 ppb and 1.5 ppb, respectively, in MW#1, and 1.5 ppb and less than 1 ppb in MW#2. MW#3, the well from which the highest concentrations of 1,1,1-trichloroethane had been detected in December 1982, was not sampled at this time. Roux's analysis also confirmed the sampling analyses performed by LKB in November, 1984 and February, 1985, which indicated levels of 1,1,1-trichloroethane at MW#1 at 65 ppb and 26 ppb, respectively. Roux's report was voluntarily delivered to NYSDEC in November of 1987, accompanied by a request to discuss an appropriate work plan and remedial investigation.

14. The New York State Department of Health adopted 5 ppb as the drinking water standard for principal organic contaminants (POCs). Such compounds, as identified in Paragraph 11 with the

exception of chloroform, are POCs and have been found to be present at the Site at levels which exceed 5 ppb. In addition, NYSDEC has established groundwater standards for 1,1,1-trichloroethane (50 ppb), tetrachloroethylene (0.7 ppb), trichloroethylene (10 ppb), 1,1-dichloroethylene (0.07 ppb), 1,1-dichloroethane (50 ppb), 1,2-dichloroethylene (50 ppb), and 1,2-dichloroethane (0.8 ppb), all of which, at the time of certain sampling, have been exceeded at the Site. Futhermore, several of the compounds which are or have been found to be present at the Site exceed maximum contaminant levels ("MCLs"), promulgated pursuant to the Safe Drinking Water Act, 42 U.S.C. §§300f-300j-11. These contaminants are 1,1,1-trichloroethane (MCL 200 ppb), trichloroethylene (MCL 5 ppb), 1,1-dichloroethylene (MCL 7 ppb) and 1,2-dichloroethane (MCL 5 ppb).

15. Compounds found to have been present in sampling conducted at the Site, including, without limitation, tetrachloroethylene, 1,1,1-trichloroethane, and trichloroethylene are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. §9601(14).

16. The presence of hazardous substances at the Site and their migration to groundwater, as indicated in sampling data referred to in this Consent Order, constitutes a "release" within the meaning of Section 101(22) of CERCLA, 42 U.S.C. §9601(22).

17. Respondent is a "person" within the meaning of Section 101(21) of CERCLA, 42 U.S.C. §9601(21).

18. Anchor operated the Site during a period when there was a release of hazardous substances at the Site and is thus a responsible party pursuant to Section 107(a)(2) of CERCLA, 42 U.S.C. §9607(a)(2). K.B. Co. is the current owner of the Site, and its predecessor, Kobar, was the owner of the Site during the period when Anchor was the sole operator at the Site and a release of hazardous substances occurred at the Site. K.B. Co. thus is a responsible party under Sections 107(a)(2) of CERCLA, 42 U.S.C. §§9607(a)(2).

19. In order to determine the nature and extent of the release and threatened release of hazardous substances at and from the Site and evaluate remedial alternatives for the Site, Respondent has volunteered to conduct a Remedial Investigation and Feasibility Study ("RI/FS") in conformance with the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300 ("NCP"), and any amendments thereto, and CERCLA, including but not limited to Sections 104 and 121, 42 U.S.C. §§9604, 9621.

20. Respondent has been given an opportunity to discuss with EPA the basis for issuance of this Consent Order and its terms. Respondent has prepared a Statement of Work ("SOW") for the performance of an RI/FS of the Site. This SOW is appended hereto as Appendix I.

21. Respondent does not, by signing this Consent Order, concede that the "Findings of Fact and Conclusions of Law" set forth herein are correct or complete. Nor does Respondent admit that it is in any way responsible for any contamination at the Site or in any way liable for remediation of the Site or any costs attendant to such remediation.

III. ORDER

22. Based on the foregoing, it is hereby ordered and agreed that Respondent shall undertake a RI/FS with respect to the Site in accordance with the requirements set forth below. All activities required by this Consent Order shall be completed as soon as possible even though maximum time periods for their completion are set forth herein and in the EPA-approved RI Work Plan, Project Operations Plan, and FS Work Plan, to be completed pursuant to the terms of this Consent Order.

Remedial Investigation and Feasibility Study Work Plan

23. Within thirty (30) days of the effective date of this Consent Order, Respondent shall submit to EPA for review and approval a Work Plan for the performance of the RI in conformance with the requirements of CERCLA, the NCP (and any amendments thereto), and applicable EPA guidance documents relating to the performance of RI/FSs under CERCLA, including EPA document, "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA." This Work Plan ("RI Work Plan") shall be consistant with and expand upon the SOW attached hereto as Appendix I.

24. EPA will review and comment in writing on the RI Work Plan. Within thirty (30) days of Respondent's receipt of written EPA comments, if any, Respondent shall amend the RI Work Plan in accordance with any such comments or as otherwise approved in writing by EPA, and submit the amended RI Work Plan to EPA. EPA remains the final arbiter in any dispute regarding the acceptability or sufficiency of an RI Work Plan and may modify it unilaterally. At such time as EPA determines that the RI Work Plan is acceptable, EPA will transmit to Respondent a written statement to that effect.

25. Within forty-five (45) days of EPA's acceptance of the RI Work Plan, Respondent shall submit to EPA for review and approval a detailed Project Operations Plan ("POP") for the performance of a Remedial Investigation ("RI") of the Site. The POP shall provide for the performance of the RI in conformance with the requirements of CERCLA and the NCP (and any amendments thereto), as well as EPA's guidance relating to the performance of remedial investigations under CERCLA, and the EPA-approved RI Work Plan. The POP shall fully describe how

the activities called for in the EPA-approved RI Work Plan will be implemented and shall include, but not necessarily be limited to, the following:

(1) a map depicting all sampling locations;

(2) the number and types of samples to be obtained at each sampling location and the analyses to be performed;

(3) a detailed schedule for the performance of the specific tasks set forth in the RI Work Plan and the POP;

(4) the overall management plan, including identification of contractors and subcontractors and their respective responsibilities for performance of the specific tasks set forth in the RI Work Plan and the POP, and the curricula vitae of all professionals expected to participate in the RI, together with a description of the responsibilities and the anticipated levels of effort of each of those professionals;

(5) a Quality Assurance/Quality Control ("QA/QC") plan for all investigations to be performed, which shall be prepared in conformance with the EPA publication entitled, "Test Methods for Evaluating Solid Waste" ("SW-846"), November, 1986, and EPA document entitled, "Guidance for Preparations of Combined Work/Quality Assurance Project Plans for Environmental Monitoring" (QAMS-005/80). The QA/QC plan shall insure that within three weeks of completion of the laboratory analyses of each round of samples collected under the RI, a QA/QC evaluation of laboratory data and sampling and analytical procedures is done for each sample;

(6) a description of the chain of custody procedures to be followed, which shall conform to those set forth in Section 1.3 of SW-846;

(7) a Health and Safety Plan prepared in accordance with the EPA guidance document, "Standard Operating Safety Guidelines" (OSWER, 1988), and 29 CFR §1910.120.

(8) a Contingency Plan for conducting Site activities; and

(9) a summary QA/QC report ("the QA/QC short form").

26. EPA will review the POP and comment thereon in writing. Within twenty (20) days of receipt of the written EPA comments, if any, Respondent shall amend the POP in accordance with any such comments or as otherwise agreed upon by EPA, and shall submit the amended POP to EPA.

27. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the POP, and EPA may modify it unilaterally. At such time as EPA determines that the POP is acceptable, EPA will transmit to Respondent a written statement to that effect.

28. Respondent shall perform the RI in conformance with the RI Work Plan and the EPA-approved POP. Respondent shall complete all activities specified in the approved POP and, in conformance with the schedule included in the approved POP, shall submit to EPA for review and approval a draft report detailing the results of the RI ("Draft RI Report").

29. Upon receipt of the Draft RI Report, EPA will review the report and comment thereon in writing. Within twenty (20) days of receipt of the written EPA comments, if any, Respondent shall amend the Draft RI Report in accordance with any such comments or as otherwise agreed upon by EPA, and shall submit the amended report to EPA.

30. In the event that EPA's comments on the Draft RI Report require Respondent to perform additional investigatory work, such work (including any necessary work plans and reports) shall be performed by Respondent in conformance with a schedule to be agreed upon and approved by EPA.

31. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the Draft RI Report and any supplementary submissions prepared in accordance with paragraph 30 above, and EPA may modify them unilaterally. At such time as EPA determines that the Draft RI Report is acceptable, EPA will transmit to Respondent a written statement to that effect and the report will be deemed the RI Report.

Feasibility Study

32. Within thirty (30) days after receiving a request and authorization from EPA to proceed with a Feasibility Study ("FS"), Respondent shall submit to EPA for review and approval a detailed work plan for the performance of an FS with respect to the Site. This FS Work Plan shall provide for the performance of the FS in conformance with the requirements of CERCLA (including, but not limited to, Section 121 thereof) and the NCP (and any amendments thereto), as well as EPA's guidance on the performance of FSs under CERCLA. The FS Work Plan shall include a schedule for the performance of the tasks comprising the FS.

33. EPA will review and comment in writing on the FS Work Plan. Within twenty (20) days after receiving the written EPA comments, Respondent shall amend the FS Work Plan as required by those comments or as otherwise approved by EPA and shall submit the amended FS Work Plan to EPA.

34. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the FS Work Plan, and EPA may modify it unilaterally. At such time as EPA determines that the FS Work Plan is acceptable, EPA will transmit to Respondent a written statement to that effect.

35. Respondent shall perform the FS in conformance with the EPA-approved FS Work Plan and the schedule contained therein. By the date specified in the schedule contained in the EPA-approved FS Work Plan, Respondent shall submit to EPA for review an FS report ("Draft FS Report").

36. EPA will review and comment on the Draft FS Report. Within twenty (20) days of receipt of EPA's comments, if any, Respondent shall amend that report in accordance with such comments or as otherwise agreed upon by EPA and shall submit the modified report to EPA.

37. In the event that EPA's comments on the Draft FS Report require that Respondent conduct additional evaluations, such work (including any necessary work plans and reports) shall be performed in accordance with a schedule approved by EPA.

38. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the Draft FS Report and any supplementary submissions prepared in accordance with paragraph 37 above, and EPA may modify them unilaterally. At such time as EPA determines that the Draft FS Report is acceptable, EPA will transmit to Respondent a written statement to that effect, and the report will be deemed the FS Report.

39. Following submittal of the FS Report, EPA will announce the availability of both the RI Report and the FS Report to the public for review and comment. Following the public comment period (which may involve both written and oral comments), EPA will determine if the reports should be modified and will notify Respondent in writing of its determination. In the event that EPA determines that either or both of the reports needs to be modified, within twenty (20) days of receipt of EPA's determination, Respondent shall modify the report(s) as directed by EPA and shall submit the modified document(s) to EPA. EPA shall remain the final arbiter in any dispute regarding the sufficiency or acceptability of both the RI and FS Reports, and EPA may modify them unilaterally.

40. EPA will make the final selection of the remedial alternative(s), if any, to be implemented with respect to the Site.

Financial Assurance

41. At least seven (7) days prior to the performance of any work under this Consent Order by Respondent's contractors and subcontractors, Respondent shall submit a certification that

the contractors and subcontractors have adequate insurance coverage or indemnification for any liability which may result from the RI/FS activities to be conducted by them.

Notification And Reporting Requirements

42. All reports and other documents submitted by Respondent to EPA (other than the monthly progress reports referred to in paragraph 43) which purport to document Respondent's compliance with the terms of this Consent Order shall be signed by a corporate officer of each of the Respondent.

43. Respondent shall provide monthly written progress reports to EPA by the tenth day of every month following the effective date of this Consent Order. The progress reports shall develop a chronological record of Site activities.

44. All work plans, reports and other documents required to be submitted to EPA under this Consent Order shall be sent by certified or express mail, return receipt requested, to the following addressees:

2 copies: Chief, New York/Caribbean Compliance Branch
Emergency and Remedial Response Division
United States Environmental Protection Agency
Region II
26 Federal Plaza, Room 747
New York, NY 10278

Attention: Dorothy Allen
Project Officer, Anchor Chemical Site

1 copy: Chief, New York/Caribbean Superfund Branch
Office of Regional Counsel
United States Environmental Protection Agency
Region II
26 Federal Plaza, Room 437
New York, NY 10278

Attention: James Doyle, Esq.

6 copies: Division of Hazardous Waste Management
New York State Department of Environmental Conservation
50 Wolf Rd.
Albany, NY 12233-0001

Attention: Marsden Chen

All notices required to be given to Respondent pursuant to the terms of this Consent Order shall be sent by certified mail, return receipt requested or by express mail to the following addressees:

1 copy: K.B. Co.
c/o Jerry Speigel Associates
375 N. Broadway
Jericho, NY 11753

Attention: Arthur D. Sanders, President
Jerry Speigel Associates

1 copy: Richard G. Leland, Esq.
Rosenman and Colin
575 Madison Avenue
New York, NY 10022-2585

2 copies: Paul Roux Associates, Inc.
The Huntington Atrium
775 Park Avenue
Suite 255
Huntington, NY 11743

45. Respondent shall give EPA seven (7) business days advance notice of the following expected activities under this Consent Order: drilling, installation, and testing of all monitoring wells and all on-site and off-site sampling activities.

46. All reports and other documents produced by Respondent and submitted to EPA in the course of implementing this Consent Order shall be available to the public unless identified as confidential by Respondent and determined by EPA to merit confidential treatment, in accordance with 40 CFR Part 2, Subpart B. In addition, EPA may release all such documents to NYSDEC, and NYSDEC may make those documents available to the public unless Respondent conforms with appropriate New York law and regulations regarding confidentiality. No sampling and monitoring data or hydrological or geological data shall be considered confidential.

47. Respondent shall use its best efforts to avoid or minimize any delay or prevention of performance of its obligations under this Consent Order. Respondent shall provide written notification to EPA of any circumstances which have caused or which Respondent believes are likely to cause a delay

soon as possible, but not later than seven (7) days after the date when Respondent learned or should have learned of the occurrence of such circumstances; (b) shall be accompanied by all available pertinent documentation, including, but not limited to, thirdparty correspondence; and (c) shall include (i) a description of the circumstances causing or potentially causing the delay; (ii) the actions (including pertinent dates) that Respondent has taken and/or plans to take to minimize any delay; and (iii) the date by which or time period within which Respondent proposes to complete the delayed activities. Such notification does not relieve Respondent of any of its obligations under this Consent Order.

Respondent's Facility Coordinator, Other Personnel

48. Not later than five (5) business days after the effective date of this Consent Order, Respondent shall select an individual to be known as the Facility Coordinator and shall notify EPA in writing of the name, address, qualifications, job title and telephone number of the Facility Coordinator. The Facility Coordinator shall be responsible for oversight of the implementation of this Consent Order. He or she shall have technical expertise sufficient to adequately oversee all aspects of the work contemplated by this Consent Order. EPA correspondence to Respondent with respect to this Consent Order will be sent to the Facility Coordinator.

49. All activities required of Respondent under the terms of this Consent Order shall be performed only by well-qualified persons possessing all necessary permits, licenses, and other authorizations required by federal, state, and local governments.

Access and Availability of Data

50. Respondent shall be responsible for obtaining in a timely fashion such access to the Site and any other premises where work under this Consent Order is to be performed as is necessary for Respondent to carry out the requirements of this Consent Order. This Consent Order does not convey any rights of access to Respondent.

51. EPA and its designated representatives, including but not limited to its employees, agents, contractors and consultants, shall be permitted to observe the work carried out pursuant to this Consent Order. Respondent shall provide EPA and its designated representatives with access to and freedom of movement at the Site (and any other premises under the ownership or control of Respondent where work under this Consent Order is performed) at all reasonable times, including, but not limited to, any time that work under this Consent Order is being performed, for purposes of inspecting or observing Respondent's progress in implementing the requirements of

this Consent Order, verifying the information submitted to EPA by Respondent, or for any other purpose reasonably related to EPA oversight of the implementation of this Consent Order. With respect to any other premises where work under this Consent Order is performed but which are not under the ownership or control of Respondent, Respondent shall not interfere with EPA access to such premises, and to the maximum extent practicable, shall support and assist EPA in obtaining access to such premises. Notwithstanding the above, EPA hereby retains all of its inspection authority under CERCLA, the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§6901-6991, and any other applicable statute. NYSDEC and its designated representatives shall be eligible to be designated representatives of EPA under this paragraph.

52. All data, information, and records created or maintained by Respondent or its contractors or consultants in connection with implementation of the work under this Consent Order, including but not limited to contractual documents, shall, without delay, be made available to EPA on request. Further, EPA shall be permitted to copy all such documents. In addition, no such data, information, or records shall be destroyed for six years after completion of the work required by this Consent Order without either the express written approval of EPA or a written offer by Respondent to provide such material to EPA, followed by EPA's written rejection of that offer.

53. Upon request by EPA, Respondent shall provide EPA or its designated representatives with duplicate and/or split samples of any material sampled in connection with the implementation of this Consent Order.

General Provisions

54. This Consent Order shall apply to and be binding upon Respondent and Respondent's receivers, trustees, successors and assigns.

55. All actions performed by Respondent pursuant to this Consent Order shall be carried out in conformance with all applicable federal, state, and local laws, regulations, and requirements, including, but not limited to, the NCP and any amendments thereto.

56. All work conducted pursuant to this Consent Order shall be performed in accordance with prevailing professional standards.

57. Respondent shall be responsible for obtaining all necessary permits, licenses and other authorizations.

58. All reports, work plans and other writings required under the terms of this Consent Order, upon approval by EPA, shall be deemed to be incorporated into this Consent Order.

59. Neither the United States Government nor any agency thereof shall be liable for any injuries or damages to persons or property resulting from acts or omissions by Respondent or Respondent's officers, directors, employees, agents, contractors, consultants, receivers, trustees, successors, or assigns in carrying out any action or activity pursuant to this Consent Order; nor shall the United States Government or any agency thereof be held out as a party to any contract entered into by Respondent in carrying out any activities pursuant to this Consent Order.

60. Respondent agrees to indemnify and hold harmless EPA and the United States Government, its agencies, departments, agents and employees, from all claims, causes of action, damages and costs of any type or description by third parties for any injuries or damages to persons or property resulting from acts or omissions of Respondent, its officers, directors, officials, agents, servants, receivers, trustees, successors, or assigns as a result of the fulfillment or attempted fulfillment of the terms and conditions of this Consent Order by Respondent.

61. Nothing herein shall constitute or be construed as a satisfaction or release from liability for Respondent or Respondent's directors, officers, employees, agents, contractors, consultants, receivers, trustees, successors or assigns or for any other individual or entity. Nothing herein shall constitute a finding that Respondent is the sole responsible party with respect to the release and threatened release of hazardous substances from the Facility.

62. Nothing contained in this Consent Order shall affect any right, claim, interest, defense, or cause of action of any party hereto with respect to third parties.

63. Respondent agrees not to make any claims pursuant to Sections 106(b)(2), 111 and/or 112 of CERCLA, 42 U.S.C. §§9606(b)(2), 9611, 9612, either directly or indirectly, for reimbursement from the Hazardous Substance Superfund of costs incurred by it in complying with this Consent Order.

64. Nothing in this Consent Order shall be construed to constitute preauthorization under Section 111(a)(2) of CERCLA, 42 U.S.C. §9611(a)(2), and 40 CFR §300.25(d).

65. No informal advice, guidance, suggestions or comments by EPA shall be construed to relieve Respondent of any of its obligations under this Consent Order.

66. Respondent's activities under this Consent Order shall be performed within the time limits set forth herein, or otherwise established or approved by EPA, unless performance is delayed by events which constitute force majeure. For purposes of this Consent Order, force majeure is defined as any event arising from causes beyond Respondent's control. Financial considerations shall not be considered circumstances beyond the control of Respondent. When an event constituting force majeure occurs, Respondent shall perform the affected activities within a time period which shall not exceed the time provided in this Consent Order together with the period of delay attributed to force majeure; provided, however, that no deadline shall be extended beyond a period of time that is reasonably necessary. Respondent shall verbally notify the EPA Project Officer identified in paragraph 44, above, as soon as possible after discovering that circumstances which may constitute force majeure have occurred or are likely to occur. If the Project Officer cannot be reached, Respondent shall leave a message at his or her office. In addition, Respondent shall notify EPA in writing as soon as possible, but not later than seven (7) days after the date when Respondent becomes aware of the circumstances alleged to constitute force majeure. Such written notice shall be accompanied by all available pertinent documentation, including, but not limited to, third-party correspondence, and shall contain the following: 1) a description of the circumstances, and Respondent's rationale for interpreting such circumstances as being beyond its control; 2) the actions (including pertinent dates) that Respondent has taken and/or plans to take to minimize any delay; and 3) the date by which or the time period within which Respondent propose to complete the delayed activities. Respondent's failure to notify EPA in a timely and proper manner, as required by this paragraph, shall render the remaining provisions of this paragraph null and void insofar as they may entitle Respondent to an extension of time. The burden of proving that an event constituting force majeure has occurred shall rest with the Respondent.

67. This Consent Order may be amended by mutual agreement of EPA and Respondent. Such amendments shall be in writing and shall have as their effective date that date on which such amendments are signed by EPA.

Reimbursement

68. Respondent agrees to reimburse EPA for all response costs, if any, not inconsistent with the NCP which are incurred by EPA with respect to the Site prior to the issuance of this Consent Order, as well as all oversight and response costs incurred by EPA with respect to the Site between the issuance of this Consent Order and the date of terminiation of this Consent Order. EPA will periodically transmit to Respondent an accounting

of the costs incurred by EPA, which will include a narrative of the activities for which the costs were incurred. These accountings will include, but not necessarily be limited to, the cost of oversight of Respondent's implementation of the requirements of this Consent Order and will include both direct and indirect costs. Respondent shall, within thirty (30) days of receipt of each such accounting, remit a cashier's or certified check for the amount of those costs, made payable to the "Hazardous Substance Superfund," to the following address:

U.S. EPA - Region II
Attn: Superfund Accounting
P.O. Box 360188M
Pittsburgh, PA 15251

Such payments shall contain a reference to the docket number of this Consent Order and shall be accompanied by a letter of explanation including the name and address of Respondent, the name of the Site (the Anchor Chemical Site); a copy of the letter shall be sent to the first two addressees listed in paragraph 44 above. Payment by Respondent shall not constitute an admission by Respondent that such oversight costs are reasonable, nor shall such payment preclude Respondent from seeking reimbursements or adjustment of costs, except as precluded by this Consent Order, which are deemed not to be reasonable.

Enforcement

69. Failure of Respondent to comply with any of the requirements of this Order may result in EPA taking the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. §9604.

70. If Respondent fails, without prior EPA approval, to comply with any of the requirements or time limits set forth in or established pursuant to this Consent Order, and such failure is not excused under the terms of paragraphs 66 and 67 above, Respondent shall pay a stipulated penalty to EPA in the amount indicated below for each day of noncompliance:

Days After Required Date	Stipulated Penalty
11 to 20 days	$1000.00/day
21 to 30 days	$2000.00/day
30 days or more	$3000.00/day

Any such penalty shall accrue as of the tenth day after the applicable deadline has passed, and shall continue to accrue until the noncompliance is corrected. Such penalties shall be due and payable ten (10) days following receipt of a written demand by EPA and shall be due and payable every thirtieth day thereafter. Payment of any such penalty to EPA

shall be made by cashier's or certified check made payable to the "Hazardous Substance Superfund," with a notation of the docket number of this Consent Order, and shall be mailed to the address set forth in paragraph 68 above. A letter stating the basis for the penalties, the name and address of Respondent, the name of the Site; a copy of the letter shall be mailed to the first two addressees listed in paragraph 44 above.

71. Notwithstanding any other provision of this Consent Order, EPA reserves its right to bring an action against Respondent (or any other responsible parties) pursuant to Section 107 of CERCLA, 42 U.S.C. §9607, for recovery of any costs incurred in oversight of Respondent's implementation of this Consent Order, and any other response costs incurred by the United States Government with respect to the Site.

72. Notwithstanding any other provision of this Consent Order, EPA reserves its right to take enforcement actions against Respondent (or any other responsible parties), including, but not limited to, actions for monetary penalties for any violation of law or this Consent Order. Such enforcement actions may include, though need not be limited to, actions pursuant to Sections 107(c)(3) and/or 109 of CERCLA, 42 U.S.C. §§9607(c)(3), 9609.

73. Nothing herein shall preclude EPA from taking any additional enforcement actions and/or additional removal or remedial actions as it may deem necessary or appropriate for any purpose, including, but not limited to, the investigation, prevention or abatement of a threat to the public health, welfare, or the environment arising from conditions at the Site.

Termination and Satisfaction

74. When Respondent concludes that it has completed the work required under this Order, Respondent shall so notify EPA by submitting a written report demonstrating that Respondent has complied with and completed the implementation of this Order. That report shall be accompanied by appropriate documentation which substantiates Respondent's assertion that the work required hereunder has been completed. The report shall further include a certification statement, signed by a responsible corporate officer of the Respondent, which states the following:

> " I certify that the information contained in or accompanying this submission is true, acurrate and complete.
>
> "As to (the) (those) identified portion(s) of this submission for which I cannot personally verify (its) (their) truth and accuracy, I certify, as the company

official having supervisory responsibility for the person(s) who, acting under my direct instructions, made the verification, that this information is true, accurate and complete."

Following receipt of the aforementioned report, and if EPA determines that the work required hereunder has been fully carried out in accordance with this Order, EPA will so notify Respondent in writing.

Effective Date and Effect of Consent

75. This Consent Order shall become effective upon receipt by Respondent, and all times for performance of actions or activities to be performed under this Consent Order shall be calculated from said effective date.

76. Respondent agrees not to contest the authority or jurisdiction of the Regional Administrator of EPA Region II to issue this Consent Order, and also agree not to contest the validity of this Consent Order in any action to enforce its provisions. Further, by consenting to this Consent Order, Respondent waives any right it may have to seek reimbursement pursuant to Sections 106(b)(2), 111 and/or 112 of CERCLA for the response costs incurred by it in complying with this Consent Order.

U.S. ENVIRONMENTAL PROTECTION AGENCY

William J. Muszynski

WILLIAM J. MUSZYNSKI, P.E.
Acting Regional Administrator
U.S. Environmental Protection Agency
Region II

6-2-89
DATE

CONSENT

The Respondent identified below has had an opportunity to confer with EPA to discuss this Consent Order. The Respondent hereby consents to the issuance of this Consent Order and to its terms. Furthermore, the individual signing this Consent Order on behalf of Respondent certifies that he or she is fully authorized to agree to the terms and conditions of this Consent Order and to bind legally the Respondent.

K.B. Co.
By SPIEGEL ASSOCIATES, Managing Agent
By [signature], President
(signature)

4/4/89
DATE

ARTHUR D. SANDERS
(printed name of signatory)

President, Spiegel Associates, Managing Agent for K.B. Co.
(title of signatory)

APPENDIX I
ORDER ON CONSENT
INDEX NUMBER II CERCLA-90208

STATEMENT OF WORK
For
500 West John Street
Hicksville, New York

April 26, 1989

Prepared For:

Rosenman & Colin
575 Madison Avenue
New York, NY 10022-2585

ROUX ASSOCIATES, INC.
Huntington Atrium
775 Park Avenue, Suite 255
Huntington, NY 11743

STATEMENT OF WORK

This Statement of Work for the 500 West John Street site (Site) describes the following four tasks:

Task 1	-	Investigation of Site History
Task 2	-	Installation of Monitoring Wells
Task 3	-	Characterization of Ground-Water and Sediment based on Target Compound Analysis
Task 4	-	Drilling of Soil Borings and Sampling of Soil and Ground Water

Task 1 - Investigation of Site History

A thorough examination of all documented past activities relating to chemical usage and disposal at the Site will be conducted. All pertinent records at the New York State Department of Environmental Conservation, Nassau County Department of Health, Fire Marshall and USEPA offices will be reviewed. In addition, all pertinent records in the possession of Anchor/Lith Kem-Ko will be obtained and reviewed. All previous investigation data for the Site will be obtained along with all published reports on geology, ground-water flow and ground-water quality for the area.

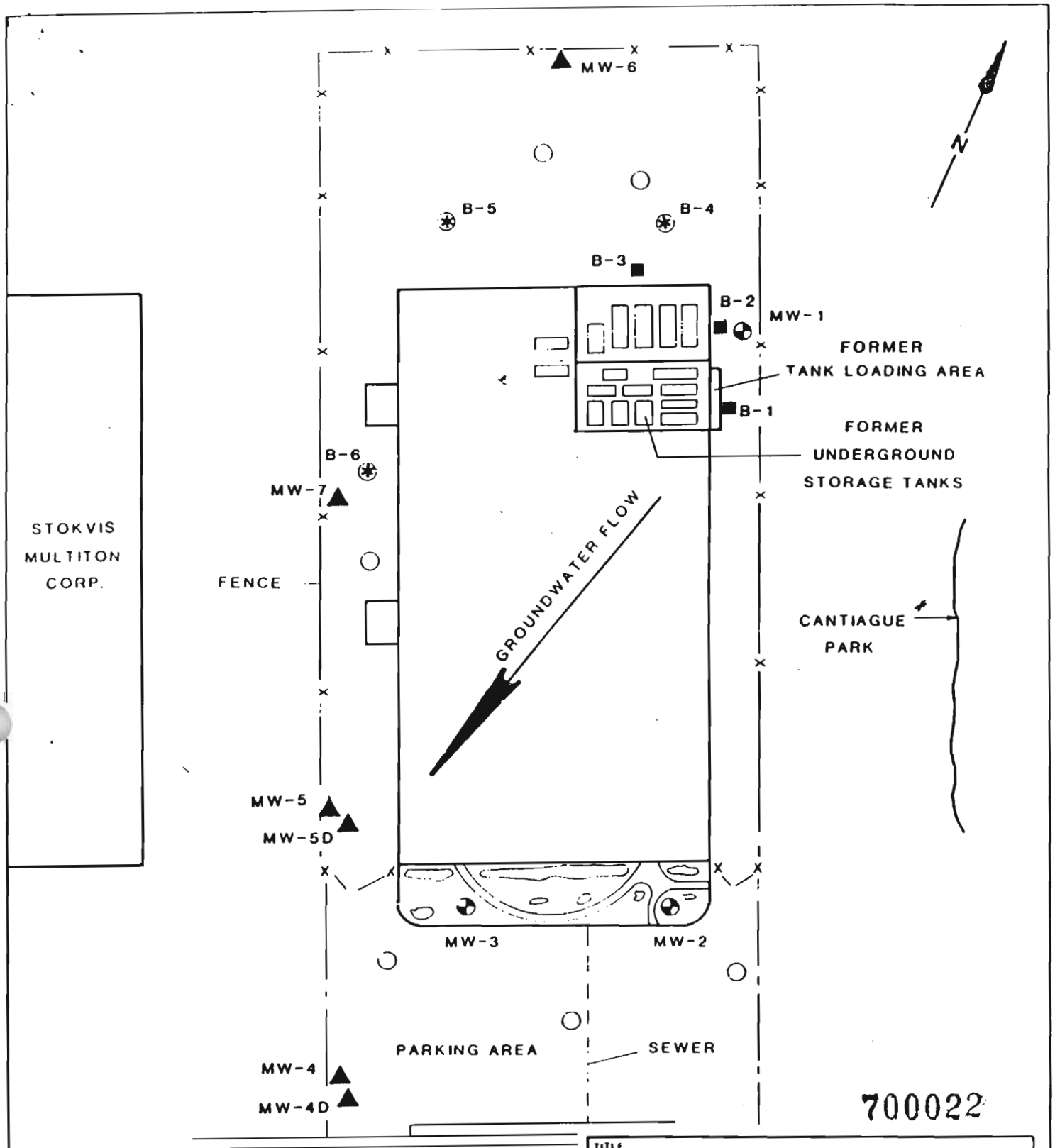
The Site history will include (to the extent possible) a complete

description of the production activities conducted at the Site, including descriptions of procedures taken to clean up chemical spills, history of chemical storage, and compositions of industrial chemical formulations. In addition, the Site history will attempt to determine whether hazardous wastes and/or hazardous substances were generated at the Site, and determine the procedures that were used for waste handling and disposal.

The Site history information and various other available data will be synthesized into a comprehensive summary which will be submitted to EPA as part of the draft Remedial Investigation Work Plan. This will ensure that the appropriate locations for monitoring wells and soil borings are selected prior to the start of the field investigation.

Task 2 - Installation of Monitoring Wells

A total of six ground-water monitoring wells will be installed at the Site (Figure 1). Four wells (MW-4, MW-5, MW-6 and MW-7) will be screened in the upper glacial aquifer at about 70 feet below land surface, and two (MW-4D and MW-5D) screened in the Magothy aquifer at approximately 140 feet below land surface to form two shallow/deep monitoring well clusters at proposed locations MW-4 and MW-5. Exact location of monitoring wells is subject to change based upon information obtained from Task 1.



700022

EXPLANATION

- ○ EXISTING DRYWELL
- ◕ EXISTING WELL
- ▲ PROPOSED WELL
- ⊛ PROPOSED SOIL BORING IN DRYWELL
- ■ PROPOSED ANGLE BORING

TITLE

PROPOSED LOCATIONS OF WELLS AND BORINGS

500 W. JOHN STREET
HICKSVILLE, NY

PREPARED FOR

ROSENMAN & COLIN

ROUX Consulting Ground-Water Geologists
ROUX ASSOCIATES INC

SCALE NONE

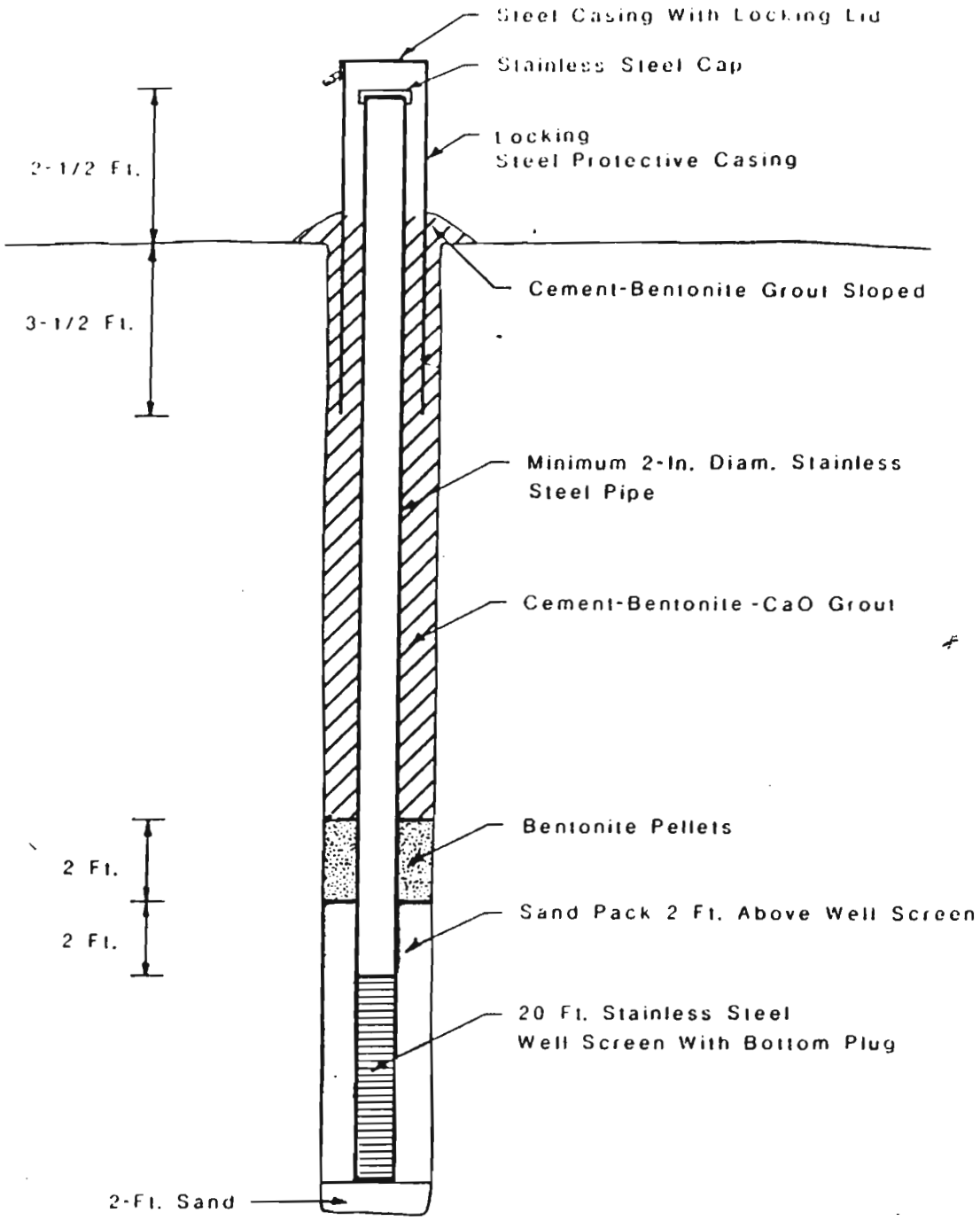
DATE 12/88

FIGURE 1

The monitoring wells will be drilled using a truck mounted hollow stem auger rig. Upon completion of the borehole, a 4-inch diameter stainless steel (304 or 316 gauge) casing with a 20-foot long screen will be installed through the auger flytes. Five feet of screen will extend above the water table to allow for seasonal water-level fluctuations. When the screen and casing are in place, a clean, graded silica sand will be used to pack the annular space around the screen.

When the well screen has been properly sand packed, two feet of bentonite pellets will be placed immediately over the filter pack to seal the annular space. The remainder of the annular space will then be grouted with a cement/bentonite slurry to two feet below grade. Well MW-6 will be finished above grade as shown on Figure 2. Well clusters MW-4 and MW-5 will be finished flush with grade, have locking caps installed, and protective meter boxes cemented in place over each well (Figure 3). USEPA guidelines will be followed for all steps of well drilling and construction.

Upon completion, each well will be developed by surging and pumping to remove any fine sediment from around the screen zone and to establish a connection between the aquifer and well. Development will continue until the water is less than 50



700024

TITLE

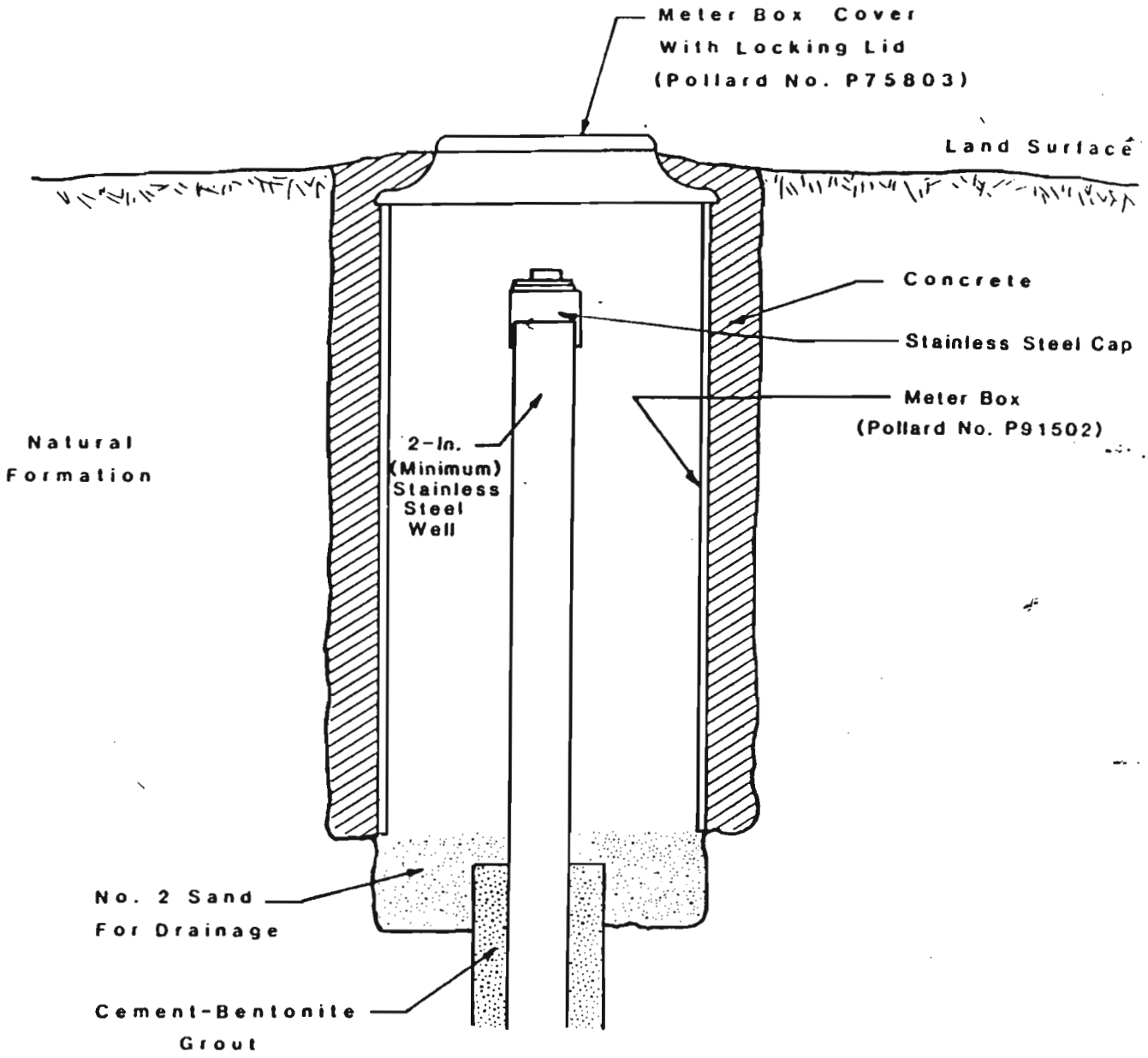
USEPA MONITORING WELL SPECIFICATIONS

PREPARED FOR

ROSENMAN & COLIN

ROUX Consulting Ground-Water Geologists
ROUX ASSOCIATES INC

SCALE	FIGURE
SHOWN	2
DATE 3/89	



700025

TITLE

PROPOSED METER BOX CONFIGURATION FOR MONITORING WELLS

PREPARED FOR

ROSENMAN & COLIN

ROUX Consulting Ground-Water Geologists
ROUX ASSOCIATES INC

SCALE NONE

DATE 3/89

FIGURE 3

nephelometric turbidity units, as required by New York State Department of Environmental Conservation.

The monitoring wells will be located relative to each other and Site landmarks using a tape measure, and the locations plotted on a base map. The well elevations will be surveyed by a New York State Licensed Land Surveyor to the nearest 0.01 feet with a closure of ± 0.05 feet for the Site. The elevation measuring point will be marked on each well casing and all water level measurements will be referenced to this point. All elevations and depths, including well casings, will be referenced to mean sea level.

Water levels in the completed wells (and three existing wells) will be measured at least three times during and after drilling and development. Information on the vertical hydraulic gradient will be provided from the two monitoring well clusters. The responsiveness of each well to water-level fluctuations in the aquifer will be tested by measuring recovery rates after pumping.

Task 3 - Characterization of Ground-Water and Sediment Based on Target Compound Analysis

After the monitoring wells have been installed and developed, ground-water will be sampled and analyzed following USEPA

protocols. The initial characterization will also include the collection and analysis of sediment and sludges in six of the nine existing drywells and the non-operational cesspool. All samples will be analyzed for the compounds on the Target Compound List (TCL) including the tentatively identified volatile organic compounds. A USEPA CLP laboratory will be retained for all analyses.

Task 4 - Drilling of Soil Borings and Sampling of Soil and Ground Water

Six soil borings will be drilled at possible contamination source areas. This includes borings in three drywells as well as borings near the underground chemical storage tank area as shown on Figure 1. Two to three borings will be angle borings under the former chemical storage tanks. The vertical borings will be drilled to the water table; the angle borings will be approximately 30-40 feet in length. Drilling will be accomplished using a truck-mounted hollow stem auger rig. Split-spoon soil samples will be collected at five-foot intervals from land surface to the bottom of the borings.

A hydrogeologist will log each core sample in detail and will include any qualitative signs of contamination (odor, staining, etc). The split-spoon sampler will be steam cleaned between samples to avoid cross contamination. All split-spoon samples

will be screened using a portable photoionization meter to assess relative concentrations of volatile organic compounds (VOCs) in each sample.

As a second round of soil/sediment sampling and analysis, three or four of the soil samples will be selected for laboratory analysis from each borehole. A second round of ground-water sampling will also occur at this time. The three presently existing wells (MW-1, MW-2 and MW-3) will be re-developed and sampled (if development is successful) during the second round of ground-water sampling. Data from the first round of ground water and sediment sampling will be analyzed so that an appropriate analytical suite for the second round can be selected. The selected suite of analytical parameters will be those compounds on the TCL that were detected at significant levels in the ground-water and sediment samples during Task 3. A USEPA CLP Laboratory will be used for all analyses.

The following amendments to the Statement of Work, Appendix I to Administrative Order on Consent, Index Number II CERCLA-90208, were agreed upon by EPA and Respondent on May 17, 1989:

(1) Add the sentence, "Exact location of the boring is subject to change based upon information obtained in Task 1" to the first paragraph in Task 4, on page five.

(2) The last sentence on page five, which continues onto page six, should be amended to read, "All split spoon samples taken during the installation of wells or drilling of soil borings will be screened at five foot intervals using a portable...sample. Only one of the wells at each of the two cluster wells shall be tested as such.

DUSTIN T. ALLEN

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

IN THE MATTER OF ANCHOR CHEMICAL Chessco Industries, Inc. Respondent.	ADMINISTRATIVE ORDER
Proceeding under Sections 106(a) of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §9606.	Index No. II CERCLA-90218

I. JURISDICTION

1. This Administrative Order ("Order") is issued to the above-captioned Respondent (hereinafter referred to as "Respondent") pursuant to the authority vested in the President of the United States under Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 ("CERCLA"), 42 U.S.C. §9606, which authority was delegated to the Administrator of the United States Environmental Protection Agency ("EPA") by Executive Order 12580, dated January 23, 1987, and duly redelegated to the Regional Administrators of EPA. Notice of the issuance of this Order was provided to the New York State Department of Environmental Conservation ("NYSDEC").

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

2. The Anchor Chemical Corporation site ("Site" or the "Facility") which is approximately 1.5 acres in size and is located at 500 West John Street in Hicksville, Nassau County, New York, constitutes a facility, as defined in Section 101(9) of CERCLA, 42 U.S.C. §9601(9). The Site includes a building where chemical blending and packaging operations were conducted.

3. Respondent is a corporation which was organized and existing by virtue of the laws of the State of New York and is a "person" within the meaning of Section 101(21) of CERCLA, 42 U.S.C. §9601(21).

4. The Site is included on the National Priorities List ("NPL") of known or threatened releases of hazardous substances, codified at 40 C.F.R. Part 300, Appendix B, as established pursuant to Section 105(a)(8)(B) of CERCLA, 42 U.S.C. §9605(a)(8)(B).

5. The Site is currently owned by K.B. Co., a New York partnership, and was formerly owned by Kobar Construction, Inc. ("Kobar"), a corporation which was organized and existing by virtue of the laws of the State of New York.

6. In 1978, Anchor Chemical Corporation was purchased by Respondent, and is now known as Anchor/Lith Kem-ko (which is wholly owned by Respondent). Between the years of 1964 and 1984, Anchor/Lith Kem-ko and its predecessor, Anchor Chemical Corporation (hereinafter referred to as "Anchor"), were the only lessees and operators at the Site and engaged in the blending and packaging of chemicals for the graphic arts industry. Such activity and the related office support have been the only known activity conducted at the Site.

7. Documentation from inspections conducted at the Site in 1977 by the Nassau County Department of Health ("NCDH"), as well as meetings between Anchor and NCDH, indicate that during the production, mixing and deliveries of chemicals spillage occurred which contaminated a drywell at the Site. Water samples taken on July 27, 1977 from the drywell at the north end of the Facility contained concentrations of 1,1,1-trichloroethane at 2,500 parts per billion ("ppb"), trichloroethylene at 15,000 ppb, and tetrachloroethylene at 20,000 ppb.

8. On August 6, 1981, in response to a notice of violation issued by the office of the Nassau County Fire Marshal ("NCFM") in May of 1981, fourteen of the seventeen (17) underground storage tanks at the Site were tested using the "air over product" procedure. The aforementioned storage tanks have storage capacities ranging from 550 to 4000 gallons and are buried two feet below grade within the Facility at the Site. The results of the tests indicated that five of the fourteen tanks tested were leaking. At or about the time of the tests, the five tanks found to be leaking were used to store naphthol spirits, acetone, mineral spirits, isopropyl alcohol, and textile spirits. The three remaining tanks at the Facility contained methylene chloride, diethylene glycol, and 1,1,1-trichloroethane, but they were not tested because said materials are not flammable and therefore were not within the jurisdiction of NCFM. Upon NCDH request, however, Anchor tested the three remaining tanks on December 12 and 14, 1982, and the tank containing methylene chloride was found to be leaking.

9. Records available to EPA depicting the chemical storage tanks at the Site as of 1965 and as of February 4, 1975 indicate that 1,1,1-trichloroethane was stored in one of the five tanks which were identified as leaking during the NCFM tests conducted on August 6, 1981.

10. In 1982, Anchor retained Lockwood, Kessler and Bartlett, Inc. ("LKB"), a consulting engineering firm, to install three

monitoring wells and conduct periodic groundwater monitoring of said wells at the Site. Soil samples collected during the well installation and analyzed by NCDH indicated the presence of methylene chloride and 1,1,1-trichloroethane in the soil.

11. Sampling and analysis of the groundwater from the three monitoring wells was performed by the NCDH in September 1982. NCDH's analysis of samples from monitoring well #1 ("MW#1"), located in the northeast corner of the Facility, indicated the following compounds above 5 ppb in concentration: (a) methylene chloride, (b) 1,1-dichloroethylene, (c) 1,1-dichloroethane, (d) 1,1,1-trichloroethane, (e) trichloroethylene, and (f) tetrachloroethylene. NCDH's analysis of samples from monitoring well #2 ("MW#2"), located in the southeast corner of the Facility, and monitoring well #3 ("MW#3"), located in the southwest corner of the Facility, indicated the same compounds as stated above, also at concentrations in excess of 5 ppb. In addition, they indicated 1,2-dichloroethylene, chloroform, and 1,2-dichloroethane in concentrations above 5 ppb. Concentrations of 1,1,1-trichloroethane as high as 11,000 ppb were indicated in analyses of samples from MW#3. These levels were confirmed during a second round of sampling by NCDH which was conducted on December 14, 1982.

12. LKB analyzed groundwater samples from MW#1, MW#2, and MW#3 on several occasions, including December 1982, June 1983, January, July, and November of 1984, and February 1985. The December 1982 analyses confirmed the NCDH sampling results. Sampling results subsequent to the December 1982 have indicated that contaminant concentrations recorded from the three wells at the Site have decreased over time.

13. The New York State Department of Health adopted 5 ppb as the drinking water standard for principal organic contaminants (POCs). Such compounds, as identified in Paragraph 11, with the exception of chloroform, are POCs and have been found to be present at the Site at levels which exceed 5 ppb. In addition, NYSDEC has established groundwater standards for 1,1,1-trichloroethane (50 ppb), tetrachloroethylene (0.7 ppb), trichloroethylene (10 ppb), 1,1-dichloroethylene (0.07 ppb), 1,1-dichloroethane (50 ppb), 1,2-dichloroethylene (50 ppb), and 1,2-dichloroethane (0.8 ppb), all of which have been exceeded at the Site. Furthermore, several of the compounds which are or have been found to be present at the Site exceed maximum contaminant levels ("MCLs"), promulgated pursuant to the Safe Drinking Water Act, 42 U.S.C. §§300f-300j-11. These contaminants are 1,1,1-trichloroethane (MCL 200 ppb), trichloroethylene (MCL 5 ppb), 1,1-dichloroethylene (MCL 7 ppb) and 1,2-dichloroethane (MCL 5 ppb).

14. Compounds found to have been present in sampling conducted at the Site, including, without limitation, tetrachloroethylene, 1,1,1-trichloroethane, and trichloroethylene, are hazardous

substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. §9601(14).

15. The presence of hazardous substances at the Site and their migration to groundwater, as indicated in sampling data referred to in this Order, constitutes a "release" within the meaning of Section 101(22) of CERCLA, 42 U.S.C. §9601(22).

16. Respondent operated the Facility at the Site during a period when there was a release of hazardous substances at the Site and is thus a responsible party pursuant to Section 107(a)(2) of CERCLA, 42 U.S.C. §9607(a)(2). K.B. Co. is the current owner of the Site, and its predecessor, Kobar, was the owner of the Site during the period when Anchor was the sole operator at the Site and a release of hazardous substances occurred at the Site. K.B. Co. thus is a responsible party under Sections 107(a)(2) of CERCLA, 42 U.S.C. §§9607(a)(2).

17. In order to determine the nature and extent of the release or threatened release of hazardous substances at and from the Site and to evaluate remedial alternatives for the Site, a Remedial Investigation and Feasibility Study ("RI/FS") must be conducted in conformance with the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 ("NCP"), and any amendments thereto, and CERCLA, including but not limited to Sections 104 and 121, 42 U.S.C. §§9604, 9621.

18. Prior to the issuance of this Order, the Acting Regional Administrator of Region II of EPA issued Administrative Order on Consent, Index Number II CERCLA-90208 ("Consent Order"), to K.B. Co. with respect to this Site. The Consent Order requires that K.B. Co. (hereinafter, "Settling Respondent") undertake a RI/FS at the Site. The Settling Respondent has agreed to, inter alia, reimburse EPA for all response costs not inconsistent with the NCP which are incurred by EPA with respect to the Site, including oversight costs associated with the issuance of the Consent Order. Respondent to this Order was provided with the opportunity to consent to the issuance of the Consent Order but declined to do so.

III. DETERMINATION

19. Based on the FINDINGS and CONCLUSIONS set forth above and the entirety of the administrative record, the Regional Administrator has determined that the release or threatened release of hazardous substances from the Facility may present an imminent and substantial endangerment to the public health or welfare or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. §6906(a).

IV. ORDER

20. Based on the foregoing, it is hereby ordered that Respondent shall participate and cooperate in the undertaking of a RI/FS with respect to the Site in accordance with the requirements set forth below. In performing the work required by this Order, Respondent shall fully participate in the efforts of and cooperate with the Settling Respondent. All activities required by this Order shall be completed as soon as possible even though maximum time periods for their completion are set forth herein and in the EPA-approved RI Work Plan, Project Operations Plan, and FS Work Plan, to be completed pursuant to the terms of this Order.

Remedial Investigation and Feasibility Study Work Plan

21. A Work Plan for the performance of the RI is being submitted pursuant to the Consent Order, and Respondent shall participate and cooperate in the provision of the Work Plan to EPA for review and approval. The RI shall be in conformance with the requirements of CERCLA, the NCP (and any amendments thereto), and applicable EPA guidance documents relating to the performance of RI/FSs under CERCLA, including EPA document, "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA." The Work Plan shall be consistent with and expand upon the Scope of Work, which is attached to and an enforceable part of the Consent Order (see appendix 1 to this Order).

22. EPA will review and comment in writing on the RI Work Plan. Within thirty (30) days of Respondent's receipt of written EPA comments, Respondent shall participate and cooperate in amending the RI Work Plan in accordance with any such comments, or as otherwise approved in writing by EPA, and submit the amended RI Work Plan to EPA. EPA remains the final arbiter in any dispute regarding the acceptability or sufficiency of an RI Work Plan and may modify it unilaterally. At such time as EPA determines that the RI Work Plan is acceptable, EPA will transmit to Respondent a written statement to that effect.

23. Within forty-five (45) days of EPA's acceptance of the RI Work Plan, Respondent shall participate and cooperate in the submission to EPA for review and approval of a detailed Project Operations Plan ("POP") for the performance of a Remedial Investigation ("RI") at the Site. The POP shall provide for the performance of the RI in conformance with the requirements of CERCLA and the NCP (and any amendments thereto), as well as EPA's guidance relating to the performance of remedial investigations under CERCLA and the EPA-approved RI Work Plan. The POP shall fully describe how the activities called for in the EPA-approved RI Work Plan will be implemented and shall include, but not necessarily be limited to, the following:

(1) a map depicting all sampling locations;

(2) the number and types of samples to be obtained at each sampling location and the analyses to be performed;

(3) a detailed schedule for the performance of the specific tasks set forth in the RI Work Plan and the POP;

(4) the overall management plan, including identification of contractors and subcontractors and their respective responsibilities for performance of the specific tasks set forth in the RI Work Plan and the POP, and the curricula vitae of all professionals expected to participate in the RI, together with a description of the responsibilities and the anticipated levels of effort of each of those professionals;

(5) a Quality Assurance/Quality Control ("QA/QC") plan for all investigations to be performed, which shall be prepared in conformance with the EPA publication entitled, "Test Methods for Evaluating Solid Waste" ("SW-846"), November, 1986, and EPA document entitled, "Guidance for Preparations of Combined Work/Quality Assurance Project Plans for Environmental Monitoring" (QAMS-005/80). The QA/QC plan shall insure that within three weeks of completion of the laboratory analyses of each round of samples collected under the RI, a QA/QC evaluation of laboratory data and sampling and analytical procedures is done for each sample;

(6) a description of the chain of custody procedures to be followed, which shall conform to those set forth in Section 1.3 of SW-846;

(7) a Health and Safety Plan prepared in accordance with the EPA guidance document, "Standard Operating Safety Guidelines" (OSWER, 1988), and 29 C.F.R. §1910.120.

(8) a Contingency Plan for conducting Site activities; and

(9) a summary QA/QC report ("the QA/QC short form").

24. EPA will review the POP and comment thereon in writing. Within twenty (20) days of receipt of the written EPA comments, Respondent shall participate and cooperate in amending the POP in accordance with any such comments, or as otherwise agreed upon by EPA, and shall submit the amended POP to EPA.

25. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the POP, and EPA may modify it unilaterally. At such time as EPA determines that the POP is

acceptable, EPA will transmit to Respondent a written statement to that effect.

26. Respondent shall participate and cooperate in the performance of the RI in conformance with the RI Work Plan and the EPA-approved POP. Respondent shall complete all activities specified in the approved POP and, in conformance with the schedule included in the approved POP, shall submit to EPA for review and approval a draft report detailing the results of the RI ("Draft RI Report").

27. Upon receipt of the Draft RI Report, EPA will review the report and comment thereon in writing. Within twenty (20) days of receipt of the written EPA comments, Respondent shall participate and cooperate in amending the Draft RI Report in accordance with any such comments or as otherwise agreed upon by EPA, and shall submit the amended report to EPA.

28. In the event that EPA's comments on the Draft RI Report require that Respondent participate and cooperate in the performance of additional investigatory work, Respondent shall participate and cooperate in the performance of such work (including any necessary work plans and reports) in conformance with a schedule approved by EPA.

29. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the Draft RI Report and any supplementary submissions prepared in accordance with paragraph 28 above, and EPA may modify them unilaterally. At such time as EPA determines that the Draft RI Report is acceptable, EPA will transmit to Respondent a written statement to that effect, and the report will be deemed the RI Report.

Feasibility Study

30. Within thirty (30) days after receiving a request and authorization from EPA to proceed with a Feasibility Study ("FS"), Respondent shall participate and cooperate in the submission to EPA of a detailed work plan for the performance of an FS with respect to the Site for review and approval. This FS Work Plan shall provide for the performance of the FS in conformance with the requirements of CERCLA (including, but not limited to, Section 121 of the Act) and the NCP (and any amendments thereto), as well as EPA's guidance on the performance of FSs under CERCLA. The FS Work Plan shall include a schedule for the performance of the tasks comprising the FS.

31. EPA will review and comment in writing on the FS Work Plan. Within twenty (20) days after receiving the written EPA comments, Respondent shall participate and cooperate in amending the FS Work Plan as required by those comments, or as otherwise approved by EPA, and shall submit the amended FS Work Plan to EPA.

32. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the FS Work Plan, and EPA may modify it unilaterally. At such time as EPA determines that the FS Work Plan is acceptable, EPA will transmit to Respondent a written statement to that effect.

33. Respondent shall participate and cooperate in the performance of the FS in conformance with the EPA-approved FS Work Plan and the schedule contained therein. By the date specified in the schedule contained in the EPA approved FS Work Plan, Respondent shall submit to EPA for review an FS report ("Draft FS Report").

34. EPA will review and comment on the Draft FS Report. Within twenty (20) days of receipt of EPA's comments, Respondent shall participate and cooperate in amending that report in accordance with such comments, or as otherwise agreed upon by EPA, and shall submit the modified report to EPA.

35. In the event that EPA's comments on the Draft FS Report require that Respondent participate and cooperate in the performance of additional evaluations, such work (including any necessary work plans and reports) shall be performed in accordance with a schedule approved by EPA.

36. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the Draft FS Report and any supplementary submissions prepared in accordance with paragraph 35 above, and EPA may modify them unilaterally. At such time as EPA determines that the Draft FS Report is acceptable, EPA will transmit to Respondent a written statement to that effect, and the report will be deemed the FS Report.

37. Following submittal of the FS Report, EPA will announce the availability of both the RI Report and the FS Report to the public for review and comment. Following the public comment period (which may involve both written and oral comments), EPA will determine if the reports should be modified and will notify Respondent in writing of its determination. In the event that EPA determines that either or both of the reports need to be modified, Respondent shall participate and cooperate in modifying the report(s) as directed by EPA and shall submit the modified document(s) to EPA within twenty (20) days of receipt of EPA's determination. EPA shall remain the final arbiter in any dispute regarding the sufficiency or acceptability of both the RI and FS Reports, and EPA may modify them unilaterally.

38. EPA will make the final selection of the remedial alternative(s), if any, to be implemented with respect to the Site.

Financial Assurance

39. At least seven (7) days prior to the performance of any work under this Order by Respondent's contractors and/or sub-contractors, Respondent shall submit a certification that said contractors and/or subcontractors have adequate insurance coverage or indemnification for any liability which may result from the RI/FS activities to be conducted by them.

Notification And Reporting Requirements

40. All reports and other documents submitted by Respondent to EPA (other than the monthly progress reports referred to in paragraph 41) which purport to document Respondent's compliance with the terms of this Order shall be signed by a corporate officer of Respondent.

41. Respondent shall participate and cooperate in providing monthly written progress reports to EPA by the tenth day of every month following the effective date of this Order. The progress reports shall develop a chronological record of Site activities.

42. All work plans, reports and other documents required to be submitted to EPA under this Order shall be sent by certified or express mail, return receipt requested, to the following addressees:

2 copies: Chief, New York/Caribbean Compliance Branch
Emergency and Remedial Response Division
United States Environmental Protection Agency Region II
26 Federal Plaza, Room 747
New York, NY 10278

Attention: Janet Cappelli
Project Officer, Anchor Chemical Site

1 copy: Chief, New York/Caribbean Superfund Branch
Office of Regional Counsel
United States Environmental Protection Agency Region II
26 Federal Plaza, Room 437
New York, NY 10278

Attention: James Doyle, Esq.

6 copies: Division of Hazardous Waste Management
New York State Department of Environmental Conservation
50 Wolf Rd.
Albany, NY 12233-0001

Attention: Marsden Chen

43. Respondent shall give EPA seven (7) business days advance notice of the following expected activities under this Order: drilling, installation, and testing of all monitoring wells and all on-site and off-site sampling activities.

44. All reports and other documents produced by Respondent and submitted to EPA in the course of implementing this Order shall be available to the public unless identified as confidential by Respondent and determined by EPA to merit confidential treatment, in accordance with 40 C.F.R. Part 2, Subpart B. In addition, EPA may release all such documents to NYSDEC, and NYSDEC may make those documents available to the public unless Respondent conforms with appropriate New York law and regulations regarding confidentiality. No sampling and monitoring data or hydrological or geological data shall be considered confidential.

45. Respondent shall use its best efforts to avoid or minimize any delay or prevention of performance of its obligations under this Order. Respondent shall provide written notification to EPA of any circumstances which have caused or which Respondent believe are likely to cause a delay in performance. Such written notice: (a) shall be provided as soon as possible, but not later than seven (7) days after the date when Respondent learned or should have learned of the occurrence of such circumstances; (b) shall include (i) a description of the circumstances causing or potentially causing the delay; (ii) the actions (including pertinent dates) that Respondent has taken and/or plans to take to minimize any delay; and (iii) the date by which or time period within which Respondent proposes to complete the delay activities. Such notification does not relieve Respondent of any of its obligations under this Order.

Respondent's Facility Coordinator, Other Personnel

46. Not later than seven (7) calendar days after the effective date of this Order, Respondent shall select an individual to be known as the Facility Coordinator and shall notify EPA in writing of the name, address, qualifications, job title and telephone number of the Facility Coordinator. The Facility Coordinator shall be responsible for oversight of the implementation of this Order. He or she shall have technical expertise sufficient to adequately oversee all aspects of the work contemplated by this Order. EPA correspondence to Respondent with respect to this Order will be sent to the Facility Coordinator.

47. All activities required of Respondent under the terms of this Order shall be performed only by well-qualified persons possessing all necessary permits, licenses, and other authorizations required by federal, state, and local governments.

Access and Availability of Data

48. Respondent shall be responsible for obtaining in a timely fashion such access to the Site and any other premises where work under this Order is to be performed as is necessary for Respondent to carry out the requirements of this Order. This Order does not convey any rights of access to Respondent.

49. EPA and its designated representatives, including but not limited to its employees, agents, contractors and consultants, shall be permitted to observe the work carried out pursuant to this Order. Respondent shall provide EPA and its designated representatives with access to and freedom of movement at the Site (and any other premises under the ownership or control of Respondent where work under this Order is performed) at all times, including, but not limited to, any time that work under this Order is being performed, for purposes of inspecting or observing Respondent's progress in implementing the requirements of this Order, verifying the information submitted to EPA by Respondent, or for any other purpose related to EPA oversight of the implementation of this Order. With respect to any other premises where work under this Order is performed but which are not under the ownership or control of Respondent, Respondent shall not interfere with EPA access to such premises, and to the maximum extent practicable, shall support and assist EPA in obtaining access to such premises. Notwithstanding the above, EPA hereby retains all of its inspection authority under CERCLA, the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§6901-6991, and any other applicable statute. NYSDEC and its designated representatives shall be eligible to be designated representatives of EPA under this paragraph.

50. All data, information, and records created or maintained by Respondent or its contractors or consultants in connection with implementation of the work under this Order, including but not limited to contractual documents, shall, without delay, be made available to EPA on request. Further, EPA shall be permitted to copy all such documents. In addition, no such data, information, or records shall be destroyed for six years after completion of the work required by this Order without either the express written approval of EPA or a written offer by Respondent to provide such material to EPA, followed by EPA's written rejection of that offer.

51. Upon request by EPA, Respondent shall provide EPA or its designated representatives with duplicate and/or split samples of any material sampled in connection with the implementation of this Order.

General Provisions

52. This Order shall apply to and be binding upon Respondent and Respondent's receivers, trustees, successors and assigns.

53. All actions performed by Respondent pursuant to this Order shall be carried out in conformance with all applicable federal, state, and local laws, regulations, and requirements, including, but not limited to, the NCP and any amendments thereto.

54. All work conducted pursuant to this Order shall be performed in accordance with prevailing professional standards.

55. Respondent shall be responsible for obtaining all necessary permits, licenses and other authorizations.

56. All reports, work plans and other writings required under the terms of this Order, upon approval by EPA, shall be deemed to be incorporated into this Order.

57. Neither the United States Government nor any agency thereof shall be held out as a party to any contract entered into by Respondent in carrying out any activities pursuant to this Order.

58. Nothing herein shall constitute or be construed as a satisfaction or release from liability for Respondent or Respondent's directors, officers, employees, agents, contractors, subcontractors, consultants, receivers, trustees, successors or assigns or for any other individual or entity. Nothing herein shall constitute a finding that Respondent is the sole responsible party with respect to the release and threatened release of hazardous substances from the Facility.

59. Nothing contained in this Order shall affect any right, claim, interest, defense, or cause of action of any party hereto with respect to third parties.

60. Nothing in this Order shall be construed to constitute preauthorization under Section 111(a)(2) of CERCLA, 42 U.S.C. §9611(a)(2), and 40 C.F.R. §300.25(d).

61. No informal advice, guidance, suggestions or comments by EPA shall be construed to relieve Respondent of any of its obligations under this Order.

Enforcement

62. Notwithstanding any other provision of this Order, EPA reserves its right to bring an action against Respondent (or any other responsible parties) pursuant to Section 107 of CERCLA, 42 U.S.C. §9607, for recovery of any costs incurred in oversight of Respondent's implementation of this Order, and any other response

costs incurred by the United States Government with respect to the Site.

63. Notwithstanding any other provision of this Order, EPA reserves its right to take enforcement actions against Respondent and any other responsible parties pursuant to Section 107 of CERCLA, 42 U.S.C. §9607, for recovery of costs incurred by EPA in the past or in the future in connection with the Site.

64. EPA retains the authority to take enforcement actions, including actions for monetary penalties, for any violation of law, regulation, or of this Order. Such enforcement actions may include, without limitation, actions for violations of this Order pursuant to Sections 106(b)(1) and 113(b) of CERCLA, U.S.C. §§ 9606(b)(1) and § 9613(b). Failure to comply with this Order or any portion hereof without sufficient cause also may subject Respondent to civil penalties of up to $25,000 per day and/or punitive damages in the amount of up to three times the amount of any costs incurred by the United States as a result of such failure, pursuant to Sections 106(b) and 107(c) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c). EPA may also take other actions as it deems necessary or appropriate for any purpose, including but not limited to, the investigation, prevention, or abatement of a threat to the public health, welfare, or to the environment arising from conditions present at the Site.

Termination and Satisfaction

65. When Respondent concludes that they have completed the work required under this Order, Respondent shall so notify EPA by submitting a written report demonstrating that Respondent has complied with and completed the implementation of this Order. That report shall be accompanied by appropriate documentation which substantiates Respondent's assertion that the work required hereunder has been completed. The report shall further include a certification statement, signed by a responsible corporate officer of the Respondent, which states the following:

> " I certify that the information contained in or accompanying this submission is true, accurate and complete.
>
> "As to (the) (those) identified portion(s) of this submission for which I cannot personally verify (its) (their) truth and accuracy, I certify, as the company official having supervisory responsibility for the person(s) who, acting under my direct instructions, made the verification, that this information is true, accurate and complete."

Following receipt of the aforementioned report, and if EPA determines that the work required hereunder has been fully

carried out in accordance with this Order, EPA will so notify Respondent in writing.

Effective Date and Effect of Consent

66. This Order shall become effective upon receipt by Respondent, and all times for performance of actions or activities to be performed under this Order shall be calculated from said effective date.

67. Not later than fourteen (14) calendar days from the effective date of this Order, Respondent may confer with EPA to discuss this Order, including its applicability, the Findings upon which the Order is based, the appropriateness of any action or activity required to be undertaken herein, or other issues or contentions directly relevant to the issuance of this Order which Respondent may have regarding this Order. Such conference is not, and shall not be deemed to be, an adversarial hearing or part of a challenge to this Order, and no official stenographic record of such proceeding shall be kept. Respondent may appear at such conference in person or by attorney or other designated representative. Any request for such conference will be made to James Doyle, Esq., of the Office of Regional Counsel, United States Environmental Protection Agency, Region II, 26 Federal Plaza, New York, New York, 10278, (212) 264-2645.

U.S. ENVIRONMENTAL PROTECTION AGENCY

William J. Muszynski

WILLIAM J. MUSZYNSKI, P.E.
Acting Regional Administrator
U.S. Environmental Protection Agency
Region II

9-3-87
DATE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

IN THE MATTER OF THE ANCHOR CHEMICAL SITE Anchor/Lith-Kem Ko, Inc., Respondent. Proceeding under Section 106(a) of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §9606(a).	ADMINISTRATIVE ORDER Index No. II CERCLA-20205

I. JURISDICTION

1. This Administrative Order ("Order") is issued to the above-captioned Respondent (hereinafter referred to as "Respondent") pursuant to the authority vested in the President of the United States under Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. §9606, which authority was delegated to the Administrator of the United States Environmental Protection Agency ("EPA") by Executive Order 12580, dated January 23, 1987, and duly redelegated to the Regional Administrators of EPA. Notice of the issuance of this Order was provided to the New York State Department of Environmental Conservation ("NYSDEC").

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

2. The Anchor Chemical Corporation site ("Site") includes the Anchor Chemical Corporation facility ("Facility") which is approximately 1.5 acres in size and is located at 500 West John Street in Hicksville, Nassau County, New York. The Facility constitutes a facility, as defined in Section 101(9) of CERCLA, 42 U.S.C. §9601(9). The Site includes a building where chemical blending and packaging operations were conducted.

3. Respondent is a corporation which is organized and existing by virtue of the laws of the State of Delaware and is a "person" within the meaning of Section 101(21) of CERCLA, 42 U.S.C. §9601(21).

4. The Site is included on the National Priorities List ("NPL") of known or threatened releases of hazardous substances, codified at 40 C.F.R. Part 300, Appendix B, as established pursuant to Section 105(a)(8)(B) of CERCLA, 42 U.S.C. §9605(a)(8)(B).

5. The Site is currently owned by K.B. Co., a New York partnership, and was formerly owned by Kobar Construction, Inc. ("Kobar"), a corporation which was organized and existing by virtue of the laws of the State of New York.

6. Respondent, a Delaware corporation, is a successor corporation to Anchor/Lith Kem-ko, Inc., a New York corporation and its predecessor, Anchor Chemical Corporation (hereinafter collectively referred to as "Anchor"). Between the years of 1964 and 1984, Anchor was the only lessee and operator at the Site and engaged in the blending and packaging of chemicals for the graphic arts industry. Such activity and the related office support have been the only known commercial activity conducted at the Site.

7. In December of 1990, Respondent was purchased by International Paper Company, a New York corporation.

8. Documentation from inspections conducted at the Site in 1977 by the Nassau County Department of Health ("NCDH"), as well as meetings between Anchor and NCDH, indicate that during the production, mixing and deliveries of chemicals spillage occurred which contaminated a drywell at the Site. Water samples taken on July 27, 1977 from the dry well at the north end of the Facility contained concentrations of 1,1,1-trichloroethane at 2,500 parts per billion ("ppb"), trichloroethylene at 15,000 ppb, and tetrachloroethylene at 20,000 ppb.

9. On August 6, 1981, in response to a notice of violation issued by the office of the Nassau County Fire Marshal ("NCFM") in May of 1981, fourteen of the seventeen underground storage tanks at the Site were tested using the "air over product" procedure. The aforementioned storage tanks have storage capacities ranging from 550 to 4000 gallons and are buried two feet below grade within the Facility at the Site. The results of the tests indicated that five of the fourteen tanks tested were leaking. At or about the time of the tests, the five tanks found to be leaking were used to store naphthol spirits, acetone, mineral spirits, isopropyl alcohol, and textile spirits. The three remaining tanks at the Facility contained methylene chloride, diethylene glycol, and 1,1,1-trichloroethane, but they were not tested because said materials are not flammable and therefore were not within the jurisdiction of NCFM. Upon NCDH request, however, Anchor tested the three remaining tanks on December 12 and 14, 1982, and the tank containing methylene chloride was found to be leaking.

10. Records available to EPA depicting the chemical storage tanks at the Site as of 1965 and as of February 4, 1975 indicate that 1,1,1-trichloroethane was stored in one of the five tanks which were identified as leaking during the NCFM tests conducted on August 6, 1981.

11. In 1982, Anchor retained Lockwood, Kessler and Bartlett, Inc. ("LKB"), a consulting engineering firm, to install three monitoring wells and conduct periodic groundwater monitoring of said wells at the Site. Soil samples collected during the well installation and analyzed by NCDH indicated the presence of methylene chloride and 1,1,1-trichloroethane in the soil.

12. Sampling and analysis of the groundwater from the three monitoring wells was performed by the NCDH in September 1982. NCDH's analysis of samples from monitoring well #1 ("MW#1"), located in the northeast corner of the Facility, indicated the following compounds above 5 ppb in concentration: (a) methylene chloride, (b) 1,1-dichloroethylene, (c) 1,1-dichloroethane, (d) 1,1,1-trichloroethane, (e) trichloroethylene, and (f) tetrachloroethylene. NCDH's analysis of samples from monitoring well #2 ("MW#2"), located in the southeast corner of the Facility, and monitoring well #3 ("MW#3"), located in the southwest corner of the Facility, indicated the same compounds as stated above, also at concentrations in excess of 5 ppb. In addition, they indicated 1,2-dichloroethylene, chloroform, and 1,2-dichloroethane in concentrations above 5 ppb. Concentrations of 1,1,1-trichloroethane as high as 11,000 ppb were indicated in analyses of samples from MW#3. These levels were confirmed during a second round of sampling by NCDH which was conducted on December 14, 1982.

13. LKB analyzed groundwater samples from MW#1, MW#2, and MW#3 on several occasions, including December 1982, June 1983, January, July, and November of 1984, and February 1985. The December 1982 analyses confirmed the NCDH sampling results. Sampling results subsequent to the December 1982 have indicated that contaminant concentrations recorded from the three wells at the Site have decreased over time.

14. The New York State Department of Health adopted 5 ppb as the drinking water standard for principal organic contaminants (POCs). Such compounds, as identified in Paragraph 12, with the exception of chloroform, are POCs and have been found to be present at the Site at levels which exceed 5 ppb. In addition, NYSDEC has established groundwater standards for 1,1,1-trichloroethane (50 ppb), tetrachloroethylene (0.7 ppb), trichloroethylene (10 ppb), 1,1-dichloroethylene (0.07 ppb), 1,1-dichloroethane (50 ppb), 1,2-dichloroethylene (50 ppb), and 1,2-dichloroethane (0.8 ppb), all of which have been exceeded at the Site. Furthermore, several of the compounds which are or have been found to be present at the Site exceed maximum contaminant levels ("MCLs"), promulgated pursuant to the Safe Drinking Water Act, 42 U.S.C. §§300f-300j-11. These contaminants are 1,1,1-trichloroethane (MCL 200 ppb), trichloroethylene (MCL 5 ppb), 1,1-dichloroethylene (MCL 7 ppb) and 1,2-dichloroethane (MCL 5 ppb).

15. Compounds found to have been present in sampling conducted at the Site, including, without limitation, tetrachloroethylene, 1,1,1-trichloroethane, and trichloroethylene, are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. §9601(14).

16. The presence of hazardous substances at the Site and their migration to groundwater, as indicated in sampling data referred to in this Order, constitutes a "release" within the meaning of Section 101(22) of CERCLA, 42 U.S.C. §9601(22).

17. Respondent's predecessors in interest operated the Facility at the Site during a period when there was a release of hazardous substances at the Site and Respondent is thus a responsible party pursuant to Section 107(a)(2) of CERCLA, 42 U.S.C. §9607(a)(2).

18. In order to determine the nature and extent of the release or threatened release of hazardous substances at and from the Site and to evaluate remedial alternatives for the Site, a Remedial Investigation and Feasibility Study ("RI/FS") must be conducted in conformance with the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 ("NCP"), and any amendments thereto, and CERCLA, including but not limited to Sections 104 and 121, 42 U.S.C. §§9604, 9621.

19. On June 2, 1989, the Acting Regional Administrator of Region II of EPA issued Administrative Order on Consent, Index Number II CERCLA-90208 ("Consent Order"), to K.B. Co. with respect to this Site. The Consent Order requires that K.B. Co. (hereinafter, "Settling Respondent") undertake a RI/FS at the Site. The Settling Respondent has agreed, inter alia, to reimburse EPA for all response costs not inconsistent with the NCP which are incurred by EPA with respect to the Site, including oversight costs associated with the issuance of the Consent Order.

20. On August 3, 1989, the Acting Regional Administrator of Region II of EPA issued Administrative Order, Index Number II CERCLA-90215, to Chessco Industries, Inc., requiring it to participate and cooperate in the RI/FS which was being performed by K.B. Co. at the Site.

21. K.B. Co. is currently conducting field activities associated with the RI, consistent with an EPA-approved work plan for the performance of the RI ("RI Work Plan") and Project Operations Plan ("POP").

III. DETERMINATION

22. Based on the FINDINGS and CONCLUSIONS set forth above and the entirety of the administrative record, the Regional Administrator has determined that the release or threatened release of hazardous substances from the Facility may present an

imminent and substantial endangerment to the public health or welfare or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. §6906(a).

IV. ORDER

23. Based on the foregoing, it is hereby ordered that Respondent shall participate and cooperate in the undertaking of a RI/FS with respect to the Site in accordance with the requirements set forth below. In performing the work required by this Order, Respondent shall fully participate in the efforts of and cooperate with the Settling Respondent. All activities required by this Order shall be completed as soon as possible even though maximum time periods for their completion are set forth herein, including performing the activities set forth in the attached and incorporated EPA-approved RI Work Plan and POP.

Remedial Investigation and Feasibility Study Work Plan

24. The RI Work Plan and the POP have been submitted and approved pursuant to the Consent Order, and Respondent shall participate and cooperate in the performance of the RI in conformance with the RI Work Plan and the POP. The RI shall be conducted in conformance with the requirements of CERCLA, the NCP (and any amendments thereto), and applicable EPA guidance documents relating to the performance of RI/FSs under CERCLA, including EPA document, "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA." Respondent shall participate and cooperate in the preparation and submittal to EPA for review and approval of a draft report detailing the results of the RI ("Draft RI Report").

25. Upon receipt of the Draft RI Report, EPA will review the report and comment thereon in writing. Within twenty (20) days of receipt of the written EPA comments, Respondent shall participate and cooperate in amending the Draft RI Report in accordance with any such comments or as otherwise agreed upon by EPA, and shall submit the amended report to EPA.

26. In the event that EPA's comments on the Draft RI Report require that Respondent participate and cooperate in the performance of additional investigatory work, Respondent shall participate and cooperate in the performance of such work (including any necessary work plans and reports) in conformance with a schedule approved by EPA.

27. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the Draft RI Report and any supplementary submissions prepared in accordance with paragraph 26, above, and EPA may modify them unilaterally. At such time as EPA determines that the Draft RI Report is acceptable, EPA will

transmit to Respondent a written statement to that effect, and the report will be deemed the RI Report.

Feasibility Study

28. Within thirty (30) days after receiving a request and authorization from EPA to proceed with a Feasibility Study ("FS"), Respondent shall participate and cooperate in the submission to EPA of a detailed work plan for the performance of an FS with respect to the Site for review and approval. This FS Work Plan shall provide for the performance of the FS in conformance with the requirements of CERCLA (including, but not limited to, Section 121 of CERCLA) and the NCP (and any amendments thereto), as well as EPA's guidance on the performance of FSs under CERCLA. The FS Work Plan shall include a schedule for the performance of the tasks comprising the FS.

29. EPA will review and comment in writing on the FS Work Plan. Within twenty (20) days after receiving the written EPA comments, Respondent shall participate and cooperate in amending the FS Work Plan as required by those comments, or as otherwise approved by EPA, and shall submit the amended FS Work Plan to EPA.

30. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the FS Work Plan, and EPA may modify it unilaterally. At such time as EPA determines that the FS Work Plan is acceptable, EPA will transmit to Respondent a written statement to that effect.

31. Respondent shall participate and cooperate in the performance of the FS in conformance with the EPA-approved FS Work Plan and the schedule contained therein. By the date specified in the schedule contained in the EPA approved FS Work Plan, Respondent shall submit to EPA for review an FS report ("Draft FS Report").

32. EPA will review and comment on the Draft FS Report. Within twenty (20) days of receipt of EPA's comments, Respondent shall participate and cooperate in amending that report in accordance with such comments, or as otherwise agreed upon by EPA, and shall submit the modified report to EPA.

33. In the event that EPA's comments on the Draft FS Report require that Respondent participate and cooperate in the performance of additional evaluations, such work (including any necessary work plans and reports) shall be performed in accordance with a schedule approved by EPA.

34. EPA remains the final arbiter in any dispute regarding the sufficiency or acceptability of the Draft FS Report and any supplementary submissions prepared in accordance with paragraph 33 above, and EPA may modify them unilaterally. At such time as

EPA determines that the Draft FS Report is acceptable, EPA will transmit to Respondent a written statement to that effect, and the report will be deemed the FS Report.

35. Following submittal of the FS Report, EPA will announce the availability of both the RI Report and the FS Report to the public for review and comment. Following the public comment period (which may involve both written and oral comments), EPA will determine if the reports should be modified and will notify Respondent in writing of its determination. In the event that EPA determines that either or both of the reports need to be modified, Respondent shall participate and cooperate in modifying the report(s) as directed by EPA and shall submit the modified document(s) to EPA within twenty (20) days of receipt of EPA's determination. EPA shall remain the final arbiter in any dispute regarding the sufficiency or acceptability of both the RI and FS Reports, and EPA may modify them unilaterally.

36. EPA will make the final selection of the remedial alternative(s), if any, to be implemented with respect to the Site.

37. EPA reserves the right to stop Respondent from proceeding further, either temporarily or permanently, on any task, activity, or deliverable at any point during the RI/FS.

38. In the event that Respondent amends or revises a report, plan, or other submittal upon receipt of EPA comments, if EPA subsequently disapproves of the revised submittal or if subsequent submittals do not fully reflect EPA's directions for changes, EPA retains the right to the following: (a) seek statutory penalties; (b) perform its own studies, complete the RI/FS (or any portion of the RI/FS), and seek reimbursement from Respondent for its costs; and/or (c) seek any other appropriate relief.

V. FINANCIAL ASSURANCE

39. At least seven (7) days prior to the performance of any work under this Order by Respondent's contractors and/or subcontractors, Respondent shall submit a certification that said contractors and/or subcontractors have adequate insurance coverage or indemnification for any liability which may result from the RI/FS activities to be conducted by them.

VI. NOTIFICATION AND REPORTING REQUIREMENTS

40. All reports and other documents submitted by Respondent to EPA (other than the monthly progress reports referred to in paragraph 41) which purport to document Respondent's compliance with the terms of this Order shall be signed by a corporate officer of Respondent.

41. Respondent shall participate and cooperate in providing monthly written progress reports to EPA by the tenth day of every month following the effective date of this Order. The progress reports shall develop a chronological record of Site activities.

42. All work plans, reports and other documents required to be submitted to EPA under this Order shall be sent by certified or express mail, return receipt requested, to the following addressees:

2 copies:
Chief, New York/Caribbean Compliance Branch II
Emergency and Remedial Response Division
United States Environmental Protection Agency Region II
26 Federal Plaza, Room 747
New York, NY 10278

Attention: Project Officer, Anchor Chemical Site

1 copy: Chief, New York/Caribbean Superfund Branch
Office of Regional Counsel
United States Environmental Protection Agency Region II
26 Federal Plaza, Room 437
New York, NY 10278

Attention: Anchor Chemical Site Attorney

6 copies: Division of Hazardous Waste Management
New York State Department of Environmental Conservation
50 Wolf Rd.
Albany, NY 12233-0001

43. Respondent shall give EPA seven (7) business days advance notice of the following expected activities under this Order: drilling, installation, and testing of all monitoring wells and all on-site and off-site sampling activities.

44. All reports and other documents produced by Respondent and submitted to EPA in the course of implementing this Order shall be available to the public unless identified as confidential by Respondent and determined by EPA to merit confidential treatment, in accordance with 40 C.F.R. Part 2, Subpart B. In addition, EPA may release all such documents to NYSDEC, and NYSDEC may make those documents available to the public unless Respondent conforms with appropriate New York law and regulations regarding confidentiality. No sampling and monitoring data or hydrological or geological data shall be considered confidential.

45. Respondent shall use its best efforts to avoid or minimize any delay or prevention of performance of its obligations under this Order. Respondent shall provide written notification to EPA of any circumstances which have caused or which Respondent

believes are likely to cause a delay in performance. Such written notice: (a) shall be provided as soon as possible, but not later than seven (7) days after the date when Respondent learned or should have learned of the occurrence of such circumstances; (b) shall include (i) a description of the circumstances causing or potentially causing the delay; (ii) the actions (including pertinent dates) that Respondent has taken and/or plans to take to minimize any delay; and (iii) the date by which or time period within which Respondent proposes to complete the delayed activities. Such notification does not relieve Respondent of any of its obligations under this Order.

VII. RESPONDENT'S FACILITY COORDINATOR, OTHER PERSONNEL

46. Not later than seven (7) calendar days after the effective date of this Order, Respondent shall propose to EPA for approval an individual to be known as the Facility Coordinator and shall notify EPA in writing of the name, address, qualifications, job title and telephone number of the proposed Facility Coordinator. The individual proposed shall have technical expertise sufficient to adequately oversee all aspects of the work contemplated by this Order. When approved, the Facility Coordinator shall be responsible for oversight of the implementation of this Order. EPA correspondence to Respondent with respect to the work to be performed pursuant to this Order will be sent to the Facility Coordinator.

47. All activities required of Respondent under the terms of this Order shall be performed only by well-qualified persons possessing all necessary permits, licenses, and other authorizations required by federal, state, and local governments.

VIII. ACCESS AND AVAILABILITY OF DATA

48. Respondent shall be responsible for obtaining in a timely fashion such access to the Site and any other premises where work under this Order is to be performed as is necessary for Respondent to carry out the requirements of this Order. This Order does not convey any rights of access to Respondent.

49. EPA and its designated representatives, including but not limited to its employees, agents, contractors and consultants, shall be permitted to observe the work carried out pursuant to this Order. Respondent shall provide EPA and its designated representatives with access to and freedom of movement at the Site (and any other premises under the ownership or control of Respondent where work under this Order is performed) at all times, including, but not limited to, any time that work under this Order is being performed, for purposes of inspecting or observing Respondent's progress in implementing the requirements of this Order, verifying the information submitted to EPA by Respondent, or for any other purpose related to EPA oversight of

the implementation of this Order. Respondent shall not interfere with EPA access to premises where work under this Order is performed, and to the maximum extent practicable, Respondent shall support and assist EPA in obtaining access to any such premises. Notwithstanding the above, EPA hereby retains all of its inspection authority under CERCLA, the Resource Conservation and Recovery Act, 42 U.S.C. §§6901-6991, and any other applicable statute. NYSDEC and its designated representatives shall be eligible to be designated representatives of EPA under this paragraph.

50. All data, information, and records created or maintained by Respondent or its contractors or consultants in connection with implementation of the work under this Order, including but not limited to contractual documents, shall, without delay, be made available to EPA on request. Further, EPA shall be permitted to copy all such documents. In addition, no such data, information, or records shall be destroyed for six years after completion of the work required by this Order without either the express written approval of EPA or a written offer by Respondent to provide such material to EPA, followed by EPA's written rejection of that offer.

51. Upon request by EPA, Respondent shall provide EPA or its designated representatives with duplicate and/or split samples of any material sampled in connection with the implementation of this Order.

IX. GENERAL PROVISIONS

52. This Order shall apply to and be binding upon Respondent and Respondent's receivers, trustees, successors and assigns.

53. All actions performed by Respondent pursuant to this Order shall be carried out in conformance with all applicable federal, state, and local laws, regulations, and requirements, including, but not limited to, the NCP and any amendments thereto.

54. All work conducted pursuant to this Order shall be performed in accordance with prevailing professional standards.

55. Respondent shall be responsible for obtaining all necessary permits, licenses and other authorizations.

56. The activities set forth in the EPA-approved RI Work Plan and the POP are incorporated as requirements of this Order. All subsequent reports, work plans, and other writings required under the terms of this Order, upon approval by EPA, shall be deemed to be incorporated into this Order, and Respondent is required to perform all activities in accordance with any schedules set forth in such reports, work plans, or documents.

57. Neither the United States Government nor any agency thereof shall be held out as a party to any contract entered into by Respondent in carrying out any activities pursuant to this Order.

58. Nothing herein shall constitute or be construed as a satisfaction or release from liability for Respondent or Respondent's directors, officers, employees, agents, contractors, subcontractors, consultants, receivers, trustees, successors or assigns or for any other individual or entity. Nothing herein shall constitute a finding that Respondent is the sole responsible party with respect to the release and threatened release of hazardous substances from the Facility.

59. Nothing contained in this Order shall affect any right, claim, interest, defense, or cause of action of any party hereto with respect to third parties.

60. Nothing in this Order shall be construed to constitute preauthorization under Section 111(a)(2) of CERCLA, 42 U.S.C. §9611(a)(2), and 40 C.F.R. §300.25(d).

61. No informal advice, guidance, suggestions or comments by EPA shall be construed to relieve Respondent of any of its obligations under this Order.

X. ENFORCEMENT

62. Notwithstanding any other provision of this Order, EPA reserves the right to bring an action against Respondent (and/or any other responsible parties) pursuant to Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any costs incurred by the United States at the Site including, but not limited to, oversight costs, any costs incurred in the event that EPA performs the RI/FS or any part thereof, and any future costs incurred by the United States in connection with response activities conducted pursuant to CERCLA at the Site.

63. EPA retains the authority to take enforcement actions, including actions for monetary penalties, for any violation of law, regulation, or of this Order. Such enforcement actions may include, without limitation, actions for violations of this Order pursuant to Sections 106(b)(1) and 113(b) of CERCLA, U.S.C. §§ 9606(b)(1) and § 9613(b). Failure to comply with this Order or any portion hereof without sufficient cause also may subject Respondent to civil penalties of up to $25,000 per day and/or punitive damages in the amount of up to three times the amount of any costs incurred by the United States as a result of such failure, pursuant to Sections 106(b) and 107(c) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c). EPA may also take other actions as it deems necessary or appropriate for any purpose, including but not limited to, the investigation, prevention, or abatement

of a threat to the public health, welfare, or to the environment arising from conditions present at the Site.

64. Respondent is jointly and severally liable for all work required to complete the RI/FS in accordance with this Order. Failure of any other liable person to complete any of the work at the Site does not relieve Respondent of its obligation to complete all work required herein.

XI. TERMINATION AND SATISFACTION

65. When Respondent concludes that they have completed the work required under this Order, Respondent shall so notify EPA by submitting a written report demonstrating that Respondent has complied with and completed the implementation of this Order. That report shall be accompanied by appropriate documentation which substantiates Respondent's assertion that the work required hereunder has been completed. The report shall further include a certification statement, signed by a responsible corporate officer of the Respondent, which states the following:

> " I certify that the information contained in or accompanying this submission is true, accurate and complete.
>
> "As to (the) (those) identified portion(s) of this submission for which I cannot personally verify (its) (their) truth and accuracy, I certify, as the company official having supervisory responsibility for the person(s) who, acting under my direct instructions, made the verification, that this information is true, accurate and complete."

Following receipt of the aforementioned report, and if EPA determines that the work required hereunder has been fully carried out in accordance with this Order, EPA will so notify Respondent in writing.

XII. EFFECTIVE DATE / OPPORTUNITY TO CONFER

66. Not later than five (5) calendar days from the date of receipt of this Order, Respondent may request a conference with EPA to discuss this Order. Any such conference shall be held within seven (7) calendar days of the date of Respondent's request. At any conference held pursuant to Respondent's request, Respondent may discuss with EPA this Order, including its applicability, the Findings upon which this Order is based, the appropriateness of any action or activity required to be undertaken herein, or other issues or contentions directly relevant to the issuance of this Order which Respondent may have regarding this Order. Such conference is not, and shall not be deemed to be, an adversarial hearing or part of a challenge to this Order, and no official stenographic record of such

proceeding shall be kept. Respondent may appear at such conference in person or by attorney or other designated representative. Any request for such conference shall be made to James Doyle, Esq., of the Office of Regional Counsel, United States Environmental Protection Agency, Region II, 26 Federal Plaza, New York, New York, 10278, (212) 264-2645.

67. Any comments which Respondent may have regarding this Order, its applicability to Respondent, the correctness of any factual determination upon which this Order is based, or any other relevant and material issue must be reduced to writing and submitted to EPA within seven (7) calendar days following receipt of this Order or, if a conference is requested, within three (3) calendar days following the conference. Any such comments should be sent by overnight carrier to James Doyle, Office of Regional Counsel, U.S. EPA, Region II, 26 Federal Plaza, Room 437, New York, New York, 10278.

68. This Order shall be effective ten (10) calendar days following receipt by Respondent unless a conference is requested as provided above. If a conference is requested, this Order shall become effective five (5) calendar days following the conference, unless this Order is modified or withdrawn by the Regional Administrator.

XIII. NOTICE OF INTENTION TO COMPLY

69. Within three (3) calendar days of the effective date of this Order, Respondent shall provide notice to EPA stating whether it intends to comply with the terms hereof. Such notice shall be conveyed to James Doyle, Office of Regional Counsel, Room 437, U.S. EPA, Region II, 26 Federal Plaza, New York, New York, 10278. In the event that Respondent fails to provide such notice, Respondent shall be deemed not to have complied with the terms of this Order.

U.S. ENVIRONMENTAL PROTECTION AGENCY

Constantine Sidamon-Eristoff
Regional Administrator
U.S. Environmental Protection Agency
Region II

3/31/92
DATE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

IN THE MATTER OF THE ANCHOR CHEMICAL SITE Anchor Lith/Kem Ko., Inc., Chessco Industries, Respondents. Proceeding under Section 106(a) of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §9606(a).	ADMINISTRATIVE ORDER ON CONSENT Index No. II CERCLA-94-0220

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order ("Order") is issued to the above-captioned Respondents (hereinafter referred to as "Respondents") pursuant to the authority vested in the President of the United States under Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. §9606, which authority was delegated to the Administrator of the United States Environmental Protection Agency ("EPA") by Executive Order 12580, dated January 23, 1987, and duly redelegated to the Regional Administrators of EPA.

2. This Order provides for the performance of a removal action by Respondents and the reimbursement of costs incurred by the United States in connection with this removal action at the Anchor Chemical Site ("Site"), which is located at 500 West John Street, Nassau County, New York. This Order requires Respondents to conduct the removal action described herein to abate an imminent and substantial endangerment to the public health, welfare, or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Site. Notice of the issuance of this Order was provided to the New York State Department of Environmental Conservation ("NYSDEC").

3. Respondents' participation in this Order shall not constitute or be construed as an admission of liability except in a proceeding to enforce the terms of this Order. Respondents agree to comply with and be bound by the terms of this Order. Respondents further agree that they will not contest the basis or validity of this Order or its terms. Respondents do not admit any of the findings made by EPA in this Order and reserve the

right to raise any defenses it may have regarding liability or responsibility in any subsequent proceedings regarding the Site.

II. PARTIES BOUND

4. This Order applies to and is binding upon Respondents and Respondents' officers, directors, successors and assigns. Respondents agree to instruct their officers, directors, employees and agents involved in the performance of the Work required by this Order to cooperate in carrying out Respondents' obligations under this Order. Respondents agree that their officers, directors, employees, and agents involved in the performance of the Work required by this Order shall take all necessary steps to accomplish the performance of said Work in accordance with this Order. The individual who has signed this Order on behalf of each Respondent certifies that he or she is authorized to bind that party to this Order. Any change in ownership or corporate status of a Respondent, including any transfer of assets or real or personal property, shall not alter that Respondent's responsibilities under this Order.

5. Respondents shall provide a copy of this Order to any subsequent owner or successor before ownership rights or stock or assets in a corporate acquisition are transferred.

6. At least thirty (30) days prior to the conveyance of any interest in real property at the Site, Respondents shall give written notice (a) to the transferee that the property is subject to this Order, and (b) to EPA and the State that it is proposing to convey the property, including the name and address of the transferee. Respondents agree to require that any successors comply with the immediately preceding sentence and Section VI.F. of this Order (Access to Property and Information).

7. Respondents shall ensure that their contractor(s), subcontractors, and representatives receive a copy of this Order and make bests efforts to ensure compliance with this Order. Notwithstanding, Respondents shall be responsible for any noncompliance with this Order.

III. DEFINITIONS

8. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or its implementing regulations. Whenever terms listed below are used in this Order, in an attachment to this Order, or in documents incorporated by reference into this Order, the following definitions shall apply:

a. "Day" means a calendar day unless otherwise expressly stated. "Working day" shall mean a day other than a Saturday,

Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal Holiday, the period shall run until the close of business on the next working day.

b. "Hazardous substance" shall have the meaning provided in Section 101(14) of CERCLA, 42 U.S.C. §9601(14).

c. "Waste" means (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any "pollutant or contaminant" under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of the Resource Conservation and Recovery Act, 42 U.S.C. § 6903(27); and (4) any mixture containing any of the constituents noted in (1), (2) or (3), above.

d. "Work" means all work and other activities required by and pursuant to this Order.

IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW

9. The Anchor Chemical Corporation site ("Site") includes the Anchor Chemical Corporation facility ("Facility") which is approximately 1.5 acres in size and is located at 500 West John Street in Hicksville, Nassau County, New York. The Facility constitutes a facility, as defined in Section 101(9) of CERCLA, 42 U.S.C. §9601(9). The Site includes a building where chemical blending and packaging operations were conducted.

10. Respondents are "persons" within the meaning of Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

11. The Site is included on the National Priorities List ("NPL") of known or threatened releases of hazardous substances, codified at 40 C.F.R. Part 300, Appendix B, as established pursuant to Section 105(a)(8)(B) of CERCLA, 42 U.S.C. § 9605(a)(8)(B).

12. The Site is currently owned by K.B. Co., a New York partnership, and was formerly owned by Kobar Construction, Inc. ("Kobar"), a corporation which was organized and existing by virtue of the laws of the State of New York.

13. Respondents and their predecessor, Anchor Chemical Corporation (hereinafter collectively referred to as "Anchor"), operated at the Site between the years of 1964 and 1984. Anchor was the only lessee and operator at the Site up to the listing of the Site on the NPL, and Anchor engaged in the blending and packaging of chemicals for the graphic arts industry. Such activity and the related office support have been the only known commercial activity conducted at the Site involving the storage and/or disposal of hazardous substances.

14. Documentation from inspections conducted at the Site in 1977 by the Nassau County Department of Health ("NCDH"), as well as meetings between Anchor and NCDH, indicate that during the production, mixing, and deliveries of chemicals, spillage occurred which contaminated drywells at the Site. Water samples taken on July 27, 1977 from the drywell at the north end of the Facility contained concentrations of 1,1,1-trichloroethane at 2,500 parts per billion ("ppb"), trichloroethylene at 15,000 ppb, and tetrachloroethylene at 20,000 ppb.

15. On August 6, 1981, in response to a notice of violation issued by the office of the Nassau County Fire Marshal ("NCFM") in May of 1981, fourteen of the seventeen underground storage tanks at the Site were tested using the "air over product" procedure. The aforementioned storage tanks have storage capacities ranging from 550 to 4000 gallons and are buried two feet below grade within the Facility at the Site. The results of the tests indicated that five of the fourteen tanks tested were leaking. Also, sampling of the dry wells at the Site, which was conducted in 1991 as part of a remedial investigation and feasibility study ("RI/FS") of the Site, revealed elevated levels of chromium, lead and organic compounds. Dry wells numbered 2, 6, and 8, all of which were installed at the Facility between 1964 and 1968, are included in the four dry wells at the Site which have been identified as requiring action.

16. At or about the time of the tests, the five tanks found to be leaking were used to store naphthol spirits, acetone, mineral spirits, isopropyl alcohol, and textile spirits. The three remaining tanks at the Facility contained methylene chloride, diethylene glycol, and 1,1,1-trichloroethane, but they were not tested because said materials are not flammable and therefore were not within the jurisdiction of NCFM. Upon NCDH request, however, Anchor tested the three remaining tanks on December 12 and 14, 1982, and the tank containing methylene chloride was found to be leaking. Since that date, EPA has overseen work confirming the decommissioning of all tanks at the facility, and subsequent sampling has confirmed that the releases which occurred from the tanks do not pose an unacceptable risk.

17. Records available to EPA depicting the chemical storage tanks at the Site as of 1965 and as of February 4, 1975 indicate that 1,1,1-trichloroethane was stored in one of the five tanks which were identified as leaking during the NCFM tests conducted on August 6, 1981.

18. In 1982, Anchor retained Lockwood, Kessler and Bartlett, Inc. ("LKB"), a consulting engineering firm, to install three monitoring wells and conduct periodic groundwater monitoring of said wells at the Site. Soil samples collected during the well installation and analyzed by NCDH indicated the presence of methylene chloride and 1,1,1-trichloroethane in the soil.

19. Sampling and analysis of the groundwater from the three monitoring wells was performed by the NCDH in September 1982. NCDH's analysis of samples from monitoring well #1 ("MW#1"), located in the northeast corner of the Facility, indicated the following compounds above 5 ppb in concentration: (a) methylene chloride, (b) 1,1-dichloroethylene, (c) 1,1-dichloroethane, (d) 1,1,1-trichloroethane, (e) trichloroethylene, and (f) tetrachloroethylene. NCDH's analysis of samples from monitoring well #2 ("MW#2"), located in the southeast corner of the Facility, and monitoring well #3 ("MW#3"), located in the southwest corner of the Facility, indicated the same compounds as stated above, also at concentrations in excess of 5 ppb. In addition, they indicated 1,2-dichloroethylene, chloroform, and 1,2-dichloroethane in concentrations above 5 ppb. Concentrations of 1,1,1-trichloroethane as high as 11,000 ppb were indicated in analyses of samples from MW#3. These levels were confirmed during a second round of sampling by NCDH which was conducted on December 14, 1982.

20. LKB analyzed groundwater samples from MW#1, MW#2, and MW#3 on several occasions, including December 1982, June 1983, January, July, and November of 1984, and February 1985. The December 1982 analyses confirmed the NCDH sampling results. Sampling results subsequent to the December 1982 have indicated that contaminant concentrations recorded from the three wells at the Site have decreased over time.

21. The New York State Department of Health adopted 5 ppb as the drinking water standard for principal organic contaminants ("POCs"). Such compounds, as identified in Paragraph 19, with the exception of chloroform, are POCs and have been found to be present at the Site at levels which exceed 5 ppb. In addition, NYSDEC has established groundwater standards for 1,1,1-trichloroethane (50 ppb), tetrachloroethylene (0.7 ppb), trichloroethylene (10 ppb), 1,1-dichloroethylene (0.07 ppb), 1,1-dichloroethane (50 ppb), 1,2-dichloroethylene (50 ppb), and 1,2-dichloroethane (0.8 ppb), all of which have been exceeded at the Site. Furthermore, several of the compounds which are or have been found to be present at the Site exceed maximum contaminant levels ("MCLs"), promulgated pursuant to the Safe Drinking Water Act, 42 U.S.C. §§300f-300j-11. These contaminants are 1,1,1-trichloroethane (MCL 200 ppb), trichloroethylene (MCL 5 ppb), 1,1-dichloroethylene (MCL 7 ppb) and 1,2-dichloroethane (MCL 5 ppb).

22. Compounds found to have been present in sampling conducted at the Site, including, without limitation, tetrachloroethylene, 1,1,1-trichloroethane, and trichloroethylene, are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. §9601(14).

23. The presence of hazardous substances at the Site and their migration to groundwater, as indicated in sampling data referred to in this Order, constitutes a "release" within the meaning of Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

24. K.B. Co. is the "owner" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).a) Respondents are former "operators" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

25. On June 2, 1989, the Acting Regional Administrator of Region II of EPA issued Administrative Order on Consent, Index Number II CERCLA-90208, to K.B. Co. with respect to this Site. That Consent Order required that K.B. Co. undertake a RI/FS at the Site.

26. On August 3, 1989, the Acting Regional Administrator of Region II of EPA issued Administrative Order, Index Number II CERCLA-90215, to Respondent Chessco Industries, requiring it to participate and cooperate in the RI/FS being performed at the Site. That order was issued unilaterally pursuant to Section 106 of the CERCLA, 42 U.S.C. § 9606.

27. In March of 1992, the Regional Administrator of Region II of EPA issued Administrative Order, Index Number II CERCLA-20205, to Respondent Anchor/Lith-Kem Ko, Inc. directing it to participate and cooperate in the performance of the RI/FS being performed at the Site. That order was issued unilaterally pursuant to Section 106 of the CERCLA, 42 U.S.C. § 9606.

28. Consistent with the administrative orders, an RI/FS was conducted in order to determine the nature and extent of the release or threatened release of hazardous substances at and from the Site and to evaluate remedial alternatives for the Site.

29. Information obtained during the RI revealed that the drywell contamination, as set forth in paragraph 15, above, is a potential source of continuing contamination at the Site, must be addressed, and is the subject of this removal action.

30. Respondents have been given the opportunity to discuss with EPA the basis for issuance of this Order and its terms.

V. DETERMINATIONS

31. The conditions present at the Facility constitute a threat to public health, welfare, or the environment based upon factors set forth in Section 300.415(b)(2) of the NCP.

32. The actual or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

33. The actions required by this Order are necessary to protect the public health, welfare, or the environment, and are not inconsistent with the NCP or CERCLA.

VI. ORDER

34. Based upon the foregoing Findings of Fact and Conclusions of Law, Determinations, and other information available to EPA, it is hereby ordered and agreed that Respondents shall undertake a response action at the Site in accordance with the requirements specified below. All activities specified below shall be initiated and completed as soon as possible even though maximum time periods for their completion are specified herein.

A. Designation of Contractor and Project Coordinator

35. Within five (5) days after the effective date of this Order, Respondents shall propose a Project Coordinator who shall be responsible for administration of all Respondents' actions required by the Order. Respondents shall submit the proposed Project Coordinator's name, address, telephone number, and qualifications to EPA. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site Work. EPA retains the right to disapprove of any Project Coordinator proposed by Respondents. If EPA disapproves of a proposed Project Coordinator, Respondents shall propose a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within five (5) working days following EPA's disapproval. Receipt by Respondents' approved Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondents. Respondents may change their designated Project Coordinator, subject to approval by EPA as set forth in this paragraph. Respondents shall notify EPA seven (7) working days before such a change is made. The initial notification may be orally made but it shall be promptly followed by a written notice.

36. Respondents shall perform the Work required by this Order or retain a contractor to perform the Work. Respondents shall notify EPA of the name and qualifications of any proposed contractor within five (5) working days of the effective date of this Order. Respondents shall also notify EPA of the name and qualifications of any other contractor or subcontractor proposed to perform work under this Order at least ten (10) days prior to commencement of such work.

37. EPA retains the right to disapprove of any, or all, of the contractors and/or subcontractors proposed by Respondents to conduct the Work. If EPA disapproves of Respondents' proposed contractor to conduct the Work, Respondents shall propose a different contractor within five (5) working days of EPA's disapproval.

38. a. Respondents shall provide a copy of this Order to each contractor and subcontractor approved and retained to perform the Work required by this Order. Respondents shall include in all contracts or subcontracts entered into for Work required under this Order provisions stating that such contractors or subcontractors, including their agents and employees, shall perform activities required by such contracts or subcontracts in compliance with this Order and all applicable laws and regulations. Respondents shall be responsible for ensuring that their contractors and subcontractors perform the Work contemplated herein in accordance with this Order.

b. Respondents shall make best efforts to coordinate in the performance of the Work required by this Order with any person not a party to this Order who is directed by EPA and who offers to perform or, in lieu of performance, to pay for all or part of the Work required by this Order. Best efforts to coordinate shall include, at a minimum:

i. replying in writing within a reasonable period to offers to perform or pay for the Work required by this Order;

ii. engaging in good-faith negotiations with any person not a party to this Order who offers to perform or pay for the Work required by this Order; and

iii. good-faith consideration of good-faith offers to perform or pay for the Work required by this Order.

39. All activities required of Respondents under the terms of this Order shall be performed only by well-qualified persons possessing all necessary permits, licenses, and other authorizations required by federal, state, and local governments, and all Work conducted pursuant to this Order shall be performed in accordance with prevailing professional standards.

40. Respondents shall direct all submissions required by this Order to the EPA On-Scene Coordinator by certified mail at the address provided in paragraph 47, below.

All notices from the EPA to Respondents in furtherance of this Order shall be directed to the Project Coordinator at the following address:

James F. O'Brien, Esq.
Bogut and O'Brien
500 North Broadway
Suite 144
Jericho, NY 11753

B. Description of Work

41. Within thirty (30) days of the effective date of this Order, Respondents shall submit to EPA for review and approval a detailed work plan ("Work Plan") containing, at a minimum, the plans and information specified below.

a. A Removal Plan describing the procedures that Respondents shall utilize to accomplish the Work in compliance with this Order, including:

i. removal of any liquid, sediments, and soils from the bottom of dry wells 2, 6, and 8;

ii. excavation of sediments and soils to a depth of two (2) feet below the bottom edge of the concrete rings and obtaining a representative sample from the remaining soils in each dry well. The excavation can be terminated should slumping soil conditions prohibit completing the excavation; and

iii. securing the completed excavations by backfilling with clean fill material (e.g. washed pea gravel).

b. a Work Plan organization identifying who will performing the required tasks;

c. a plan for the removal, containerization, staging, and disposal of excavated materials;

d. a plan for mapping dry wells 2, 6 and 8, on-Site Work and safety zones and sample locations;

e. a Decontamination Plan;

f. project management and coordination;

g. a detailed Implementation Schedule;

h. progress and final reporting;

i. a Sampling and Analysis Plan;

j. a Site Health and Safety Plan ("HASP") which will address all Site activities for the protection of on-site workers and the nearby population. The HASP shall conform with both the Occupational Safety and Health Administration regulations, 29 CFR 1910, and EPA guidance document entitled "Standard Safety Guide", OSWER Directive 9285.1-03, dated June 1992.

k. a Site specific quality assurance/quality control ("QA/QC") plan for the performance of sampling and analysis. The QA/QC plan shall be in conformance with the EPA publication entitled "Test Methods for Evaluating Solid Waste (SW-846), 3rd ed.", and the EPA document entitled "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans" (QAMS -005/80). Sampling and analysis shall also conform to QA/QC protocols, including EPA guidance document entitled "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures", OSWER Directive No. 9360.4-01, April 1990.

42. EPA may approve, disapprove, require revisions to, or modify the Work Plan consistent with the Work as set forth in paragraph 41, above. If EPA requires revisions, Respondents shall submit a revised draft Work Plan within ten (10) days of receipt of EPA's notification of the required revisions. Respondents shall implement the Work Plan as finally approved in writing by EPA in accordance with the schedule approved by EPA.

43. If, during the performance of any phase of the approved Work Plan, EPA or Respondents deem it necessary to alter the tasks specified in the Work Plan, Respondents shall submit to EPA for review and approval any proposed amendments to the Work Plan prior to performing the Work, consistent with the Work as set forth in paragraph 41, above.

44. Within ten (10) days after EPA's approval of the Work Plan, Respondents shall commence implementation of the Work Plan.

45. Respondents shall allow EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by Respondents while performing Work under this Order. Respondents shall notify EPA not less than ten (10) days in advance of any sample collection activity, unless EPA expressly authorizes to the contrary. EPA or its authorized representatives shall have the right to take any additional samples that they deem necessary.

C. Reporting

46. The Work Plan, Work Plan amendments, the Final Report as described in paragraph 48, below, and other documents submitted by Respondents to EPA which purport to document Respondents' compliance with the terms of this Order shall be signed by a responsible official of Respondents. For purposes of this Order, a responsible official is an official who is in charge of a principal business function.

47. The Work Plan, Work Plan amendments, the Final Report, and other documents required to be submitted to EPA under this Order shall be sent to the following addressees:

2 copies to:

Removal Action Branch
United States Environmental Protection Agency
2890 Woodbridge Avenue, Building 209
Edison, New Jersey 08837

Attn: Anchor Chemical Site OSC

1 copy to:

Chief, New York/Caribbean Superfund Branch
Office of Regional Counsel
United States Environmental Protection Agency
290 Broadway, 17th Floor
New York, New York 10007-1866

Attention: Anchor Chemical Site Attorney

1 copy to:

Chief, New York/Caribbean Superfund Branch II
United States Environmental Protection Agency
290 Broadway, 20th Floor
New York, New York 10007-1866

Attention: Anchor Chemical Project Manager

2 copies to:

Michael O'Toole, P.E.
Director, Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road, Room 212
Albany, New York 12233-7010

Attention: Anchor Chemical Site

48. Within forty-five (45) days of completion of all field activities, Respondents shall submit to EPA for review and approval a Removal Action Final Report ("Final Report") summarizing the actions taken to comply with this Order. The Final Report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." Within thirty (30) days after EPA's receipt of the Final Report, Respondents shall submit to EPA a Final Report Addendum which will include all QA/QC documentation, including chain of custody and data validation records. The Final Report shall include:

a. a synopsis of all Work performed under this Order;

b. a detailed description of all EPA-approved modifications to the Work Plan which occurred during Respondents' performance of the Work required under this Order;

c. a listing of quantities and types of materials removed from the Site or handled on-Site;

d. a discussion of removal and disposal options considered for those materials;

e. a listing of the ultimate destination of those materials;

f. a presentation of the analytical results of all sampling and analyses performed; and

g. accompanying appendices containing all relevant documentation generated during the Work (e.g., manifests, invoices, bills, contracts, and permits).

49. The Final Report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

> "Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

50. If EPA disapproves or otherwise requires any modifications to the Final Report to be submitted to EPA for approval pursuant to this Order, Respondents shall have thirty (30) days from the receipt of notice of such disapproval or the required modifications to correct any deficiencies and resubmit the Final Report.

51. EPA shall be the final arbiter in any dispute regarding the sufficiency or acceptability of all documents submitted and all activities performed pursuant to this Order. EPA may modify those documents and/or perform additional work unilaterally. EPA may also require Respondent to implement the activities described in paragraph 41, above, and paragraph 68, below.

52. All plans, reports and other submittals required to be submitted to EPA pursuant to this Order, upon approval by EPA, shall be deemed to be incorporated in and an enforceable part of this Order.

D. Oversight

53. During the implementation of the requirements of this Order, Respondents and their contractor(s) and subcontractors shall be available for such conferences with EPA and inspections by EPA or its authorized representatives as EPA may determine are necessary to oversee the Work being carried out or to be carried out by Respondents, including inspections at the Site and at laboratories where analytical work is being done hereunder.

54. Respondents and their employees, agents, contractor(s) and consultant(s) shall cooperate with EPA in its efforts to oversee Respondents' implementation of this Order.

E. Community Relations

55. Respondents shall cooperate with EPA in providing information relating to the Work required hereunder to the public. As requested by EPA, Respondents shall participate in the preparation of all appropriate information disseminated to the public and in public meetings which may be held or sponsored by EPA to explain activities at or concerning the Site.

F. Access to Property and Information

56. Respondents shall provide and/or obtain access to the Site and off-site areas to which access is necessary to implement this Order. EPA, NYSDEC and their designated representatives, including, but not limited to, employees, agents, contractor(s) and consultant(s) thereof, shall be permitted to observe the Work carried out pursuant to this Order. Respondents shall at all times permit EPA, NYSDEC, and their designated representatives full access to and freedom of movement at the Site and any other premises where Work under this Order is to be performed including, but not limited to, any time that Work under this Order is being performed, for purposes of inspecting or observing Respondents' progress in implementing the requirements of this Order, verifying the information submitted to EPA by Respondents, conducting investigations relating to contamination at the Site, or for any other purpose EPA determines to be reasonably related to EPA oversight of the implementation of this Order.

57. Where action under this Order is to be performed in areas owned by or in possession of someone other than Respondents, Respondents shall use their best efforts to obtain access agreements from the present owners within twenty (20) days of the effective date of this Order for purposes of implementing the requirements of this Order. Such agreements shall provide access not only for Respondents, but also for EPA and its designated representatives or agents, as well as NYSDEC and its designated representatives or agents. Such agreements shall specify that Respondents are not EPA's representative with respect to

liability associated with Site activities. If such access agreements are not obtained by Respondents within the time period specified herein, Respondents shall immediately notify EPA of any failure to obtain access and shall include in that notification a summary of the steps Respondents have taken to attempt to obtain access. Subject to the United States' non-reviewable discretion, EPA may use its legal authorities to obtain access for Respondents, may perform those response actions with EPA contractors at the property in question, or may terminate the Order if Respondents cannot obtain access agreements. If EPA performs those tasks or activities with EPA contractors and does not terminate the Order, Respondents shall perform all other activities not requiring access to that property. Respondents shall integrate the results of any such tasks undertaken by EPA into any reports and deliverables.

58. Respondents shall provide EPA with access to all records and documentation related to the conditions at the Site and the actions conducted pursuant to this Order. All data, information and records created, maintained, or received by Respondents or their contractor(s) or consultant(s) in connection with implementation of the Work under this Order, including, but not limited to, contractual documents, invoices, receipts, work orders and disposal records shall, without delay, be made available to EPA upon request. EPA shall be permitted to copy all such documents. Respondents shall submit to EPA upon receipt the results of all sampling or tests and all other data generated by Respondents or their contractor(s), or on Respondents' behalf, during implementation of this Order.

59. Notwithstanding any other provision of this Order, EPA hereby retains all of its information gathering, access, and inspection authority under CERCLA, RCRA, and any other applicable statute or regulations.

G. Record Retention, Documentation, Availability of Information

60. Respondents shall preserve all documents and information relating to Work performed under this Order, or relating to the hazardous substances found on or released from the Site, for ten years following completion of the removal actions required by this Order. At the end of the ten year period, Respondents shall notify EPA thirty (30) days before any document or information is destroyed, that such documents and information are available for inspection. Upon request, Respondents shall provide EPA with the originals or copies of such documents and information. In addition, Respondents shall provide documents and information retained under this Section at any time before expiration of the ten year period at the written request of EPA.

61. All documents submitted by Respondents to EPA in the course of implementing this Order shall be available to the public

unless identified as confidential by Respondents pursuant to 40 CFR Part 2, Subpart B, and determined by EPA to merit treatment as confidential business information in accordance with applicable law. In addition, EPA may release all such documents to NYSDEC, and NYSDEC may make those documents available to the public unless Respondents conforms with applicable New York law and regulations regarding confidentiality. Respondents shall not assert a claim of confidentiality regarding any monitoring or hydrogeologic data, any information specified under Section 104(e)(7)(F) of CERCLA, or any other chemical, scientific or engineering data relating to the Work performed hereunder.

62. Respondents shall maintain an updated log of documents with a claim of privilege on a document-by-document basis, containing the date, author(s), addressee(s), subject, the privilege or grounds claimed (e.g., attorney work product, attorney-client), and the factual basis for assertion of the privilege. Respondents shall keep the "privilege log" on file and available for inspection. EPA may at any time challenge claims of privilege.

H. Off-Site Shipments

63. All hazardous substances, pollutants, or contaminants removed from the Site pursuant to this Order for off-site treatment, storage, or disposal shall be treated, stored, or disposed of in conformance with EPA's Off-Site rule set forth at 58 Fed. Reg. 49200 (September 22, 1993), codified at 40 CFR 300.440.

64. If hazardous substances from the Site are to be shipped outside of New York State, Respondents shall provide prior notification of such out-of-state waste shipments in accordance with OSWER Directive 9330.2-07. At least five (5) working days prior to out-of-state waste shipments, Respondents shall notify the environmental agency of the accepting state of the following: (a) the name and location of the facility to which the wastes are to be shipped; (b) the type and quantity of waste to be shipped; (c) the expected schedule for the waste shipments; and (d) the method of transportation.

I. Compliance With Other Laws

65. All actions required pursuant to this Order shall be performed in accordance with all applicable local, state, and federal laws and regulations except as provided in CERCLA §121(e), 42 U.S.C. §9621(e), and 40 CFR §300.415(i). In accordance with 40 CFR Section 300.415(i), all on-Site actions required pursuant to this Order shall, to the extent practicable and as determined by EPA considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state

environmental or facility siting laws consistent with the Work as set forth in paragraph 41, above. (See "The Superfund Removal Procedures: Guidance on the Consideration of ARARs During Removal Actions," OSWER Directive No. 9360.3-02, August 1991). Respondents shall identify ARARs in the Work Plan.

66. Notwithstanding any other provision in this Order, and in accordance with Section 121(e)(1) of CERCLA, 42 U.S.C. §9621(e)(1), no Federal, state, or local permit shall be required for any portion of the Work required hereunder that is conducted entirely on-Site, although Respondents must comply with the substantive requirements that would otherwise be included in such a permit. Respondents shall obtain all permits necessary for off-Site Work under federal, state, or local laws and shall submit timely applications and requests for any such permits. This Order is not, nor shall it act as, a permit issued pursuant to any federal or state statute or regulation.

J. Emergency Response and Notification of Releases

67. Upon the occurrence of any event during performance of the Work required hereunder which, pursuant to Section 103 of CERCLA, 42 U.S.C. §9603, requires reporting to the National Response Center [(800) 424-8802], Respondents shall immediately orally notify the Chief of the Removal Action Branch of the Emergency and Remedial Response Division of EPA, Region II, at (908) 321-6621, or the EPA Region II Emergency 24-hour Hot Line at (908) 548-8730), of the incident or Site conditions. Respondents shall submit a written report to EPA within seven (7) days after such a release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, not in lieu of, reporting under CERCLA Section 103(c), 42 U.S.C. §9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004.

68. In the event of any action or occurrence during Respondents' performance of the requirements of this Order which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action to prevent, abate, or minimize the threat and shall immediately notify the OSC as provided in the preceding paragraph. Respondents shall take such action in accordance with applicable provisions of this Order including, but not limited to, the Health and Safety Plan. In the event that EPA determines that (a) the activities performed pursuant to this Order, (b) significant changes in conditions at the Site, or (c) emergency circumstances occurring at the Site pose a threat to human health or the environment, EPA may direct Respondents to stop further

implementation of any actions pursuant to this Order or to take other and further actions reasonably necessary to abate the threat.

VII. REIMBURSEMENT OF COSTS

69. Respondents hereby agree to reimburse EPA for all response costs incurred by EPA related solely to the oversight and implementation of this Order, including both direct and indirect costs. EPA will send a bill to Respondents for the costs incurred by EPA. The billing will be accompanied by a printout of cost data in EPA's financial management system and by a calculation of EPA's indirect costs. EPA's costs may include costs incurred by EPA in overseeing Respondents' implementation of the requirements of this Order and any costs incurred while obtaining access. Respondents shall, within thirty (30) days of receipt of such billing, remit a cashier's or certified check for the amount of those costs, made payable to the "Hazardous Substance Superfund."

70. The payment that Respondents is required to make pursuant to the preceding paragraph shall be mailed to the following address:

EPA - Region II
Attn: Superfund Accounting
P.O. Box 360188M
Pittsburgh, PA 15251

The check shall reference the name of the Site (the "Anchor Chemical Superfund Site") and the index number of this Order. A copy of the check and of the accompanying transmittal letter shall be sent to the EPA addresses identified in paragraph 47, above.

71. Respondents shall pay interest on any amounts overdue under paragraph 69, above. Such interest shall begin to accrue on the first day that the respective payment is overdue. Interest shall accrue at the rate of interest on investments of the Hazardous Substances Superfund, in accordance with Section 107(a) of CERCLA.

VIII. FORCE MAJEURE

72. Respondents agree to perform all requirements under this Order within the time limits established under this Order, unless the performance is delayed by an event of force majeure. For purposes of this Order, a force majeure event is defined as any event arising from causes beyond the control of Respondents or of any entity controlled by Respondents, including their contractors and subcontractors, that delays or prevents performance of any obligation under this Order despite Respondents' best efforts to fulfill the obligation. A force majeure event does not include

financial inability to complete the Work or increased cost of performance.

73. Respondents shall orally notify the EPA On-Scene Coordinator if circumstances have occurred or are likely to occur which may delay or prevent the performance of any activity required by this Order, regardless of whether those circumstances constitute an event of force majeure. If the On-Scene Coordinator cannot be reached, Respondents shall leave a message at his or her office. In addition, Respondents shall notify EPA in writing within seven (7) calendar days after the date when Respondents first become aware or should have become aware of the circumstances which may delay or prevent performance. Such written notice shall be accompanied by all available and pertinent documentation, including third-party correspondence, and shall contain the following: (a) a description of the circumstances, and Respondents' rationale for interpreting such circumstances as being beyond their control (should that be Respondents' claim); (b) the actions (including pertinent dates) that Respondents have taken and/or plans to take to minimize any delay; and (c) the date by which or the time period within which Respondents propose to complete the delayed activities. Such notification shall not relieve Respondents of any of their obligations under this Order. Respondents' failure to timely and properly notify EPA as required by this paragraph shall constitute a waiver of Respondents' right to claim an event of force majeure. The burden of proving that a force majeure event has occurred shall rest with Respondents.

74. If EPA determines a delay in performance of a requirement under this Order is or was attributable to an event of force majeure, the time period for performance of that requirement shall be extended as deemed necessary by EPA. Such an extension shall not alter Respondents' obligation to perform or complete other tasks required by the Order which are not directly affected by the event of force majeure.

IX. STIPULATED AND STATUTORY PENALTIES

75. If Respondents fail, without prior EPA approval, to comply with any of the requirements or time limits set forth in or established pursuant to this Order, and such failure is not excused under the terms of Section VIII (Force Majeure), Respondents shall, upon demand by EPA, pay a stipulated penalty to EPA in the amount indicated below for each day of noncompliance:

Days After Required Date	Stipulated Penalty
1 to 10 days	$ 1,000.00/day
11 to 20 days	$ 2,000.00/day
21 to 40 days	$ 4,000.00/day

Any such penalty shall accrue as of the first day after the applicable deadline has passed and shall continue to accrue until the noncompliance is corrected, through the 40th day of such noncompliance. Such penalties shall be due and payable ten (10) days following receipt of a written demand from EPA. Payment of any such penalty to EPA shall be made by cashier's or certified check made payable to the "Hazardous Substance Superfund," with a notation of the index number of this Order, and shall be mailed to the address set forth in paragraph 70, above. A letter stating the basis for the penalties, the name and address of the Site, and the EPA Region number shall accompany any such payment; a copy of the letter and the check shall be mailed to the EPA addressees listed in paragraph 47, above. Late payments shall accrue interest in accordance with Section VII of this Order (Reimbursement of Costs).

76. Even if violations are simultaneous, separate penalties shall accrue for separate violations of this Order. Penalties accrue and are assessed per violation per day. Penalties shall accrue regardless of whether EPA has notified Respondents of a violation or act of noncompliance. The payment of penalties shall not alter in any way Respondents' obligation to complete the performance of the Work required under this Order.

77. Violation of any provision of this Order may subject each Respondent to civil penalties of up to twenty-five thousand dollars ($25,000) per violation per day, as provided in Section 106(b)(1) of CERCLA, 42 U.S.C. § 9606(b)(1). Each Respondent may also be subject to punitive damages in an amount up to three times the amount of any cost incurred by the United States as a result of such violation, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondents violate this Order or any portion thereof, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

X. RESERVATION OF RIGHTS

78. Except as specifically provided in this Order, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondents under Section 107 of

CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or the Site and not otherwise reimbursed by Respondents.

XI. OTHER CLAIMS

79. By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents or Respondents' employees, agents, contractors, or consultants in carrying out any action or activity pursuant to this Order. The United States or EPA shall not be deemed a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Order.

80. Nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against Respondents or any person not a party to this Order for any liability that such person may have under CERCLA, other statutes, or the common law, including but not limited to any claims of the United States for costs, damages, and interest under Sections 106(a) and 107(a) of CERCLA, 42 U.S.C. §§ 9606(a) and 9607(a).

81. Nothing in this Order shall affect any right, claim, interest, defense, or cause of action of any party hereto with respect to third parties.

82. Nothing in this Order shall be construed to constitute preauthorization under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2), and 40 CFR § 300.700(d).

83. This Order does not constitute a preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2). Respondents waive any claim to payment under Sections 106(b), 111, and 112 of CERCLA, 42 U.S.C. §§ 9606(b), 9611, and 9612, against the United States or the Hazardous Substance Superfund arising out of any action performed under this Order.

84. No action or decision by EPA pursuant to this Order shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XII. INDEMNIFICATION

85. Respondents agree to indemnify, save, and hold harmless the United States, its agencies, departments, officials, agents, contractors, subcontractors, employees, and representatives from any and all claims, causes of action, damages, and costs of any type or description by third parties for any injuries or damages to persons or property resulting from acts or omissions of

Respondents, their officers, directors, officials, agents, servants, receivers, trustees, successors, or assigns as a result of the fulfillment or attempted fulfillment of the terms and conditions of this Order by Respondents.

86. Claims or causes of action referenced in the preceding paragraph include claims or causes of action (a) arising from, or on account of, acts or omissions of Respondents, Respondents' officers, heirs, directors, employees, agents, contractors, subcontractors, receivers, trustees, successors or assigns, in carrying out actions pursuant to this Order; and (b) for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondents and any persons for performance of Work on or relating to the Site, including claims on account of construction delays.

87. Respondents agree to pay the United States all costs incurred by the United States, including litigation costs arising from or on account of claims made against the United States based on any of the acts or omissions referred to in the two preceding paragraphs.

XIII. INSURANCE

88. Prior to commencing any Work at the Site, Respondents shall obtain from their contractors a certification that the contractors have adequate insurance coverage for any liability which may result from the activities to be conducted by them under this Order, and shall submit this to the EPA.

XIV. FINANCIAL ASSURANCE

89. Respondents shall demonstrate their ability to complete the Work required by this Order and to pay all claims that arise from the performance of the Work by obtaining and presenting to EPA within ten (10) days of the effective date of this Order one of the following: (1) a performance bond; (2) a letter of credit; (3) a guarantee by a third party; or (4) other financial information sufficient for EPA to determine that Respondents have sufficient assets available to perform the Work. Respondents shall demonstrate financial assurance in an amount no less than the estimated cost of the Work to be performed by Respondents under this Order. If EPA determines that such financial information is inadequate, Respondents shall, within five (5) days after receipt of EPA's notice of determination, obtain and present to EPA for approval one of the other three forms of financial assurance listed above.

XV. MODIFICATIONS

90. Modifications to any plan or schedule may be made in writing by the On-Scene Coordinator or at the On-Scene Coordinator's oral

direction. If the On-Scene Coordinator makes an oral modification, it will be memorialized in writing within seven (7) days; provided, however, that the effective date of the modification shall be the date of the On-Scene Coordinator's oral direction. Any other requirements of the Order may be modified in writing by mutual agreement of the parties.

91. If Respondents seek permission to deviate from any approved Work Plan or schedule, Respondents' Project Coordinator shall submit a written request to EPA for approval outlining the proposed Work Plan modification and its basis.

92. No informal advice, guidance, suggestion, or comment by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain such formal approval as may be required by this Order and to comply with all requirements of this Order unless it is formally modified.

XVI. TERMINATION AND SATISFACTION

93. When Respondents are satisfied that the Work required by this Order has been completed, Respondents shall submit written submittal to EPA specifically setting forth how Respondents have complied with this Order and have satisfactorily implemented the requirements set forth herein. The submittal shall be accompanied by appropriate documentation which substantiates to EPA's satisfaction Respondents' assertion that the Work required hereunder has been satisfactorily completed, such as the Final Report as set forth in paragraph 48. The submittal shall further include a sworn statement by Respondents setting forth the following:

> "I certify that the information contained in and accompanying this submission to the United States Environmental Protection Agency is true, accurate, and complete.
>
> "As to the following specifically identified portion(s) of this submission which I cannot attest to as true, accurate and complete on the basis of personal knowledge, I hereby certify and/or declare that I have fully investigated the bases of this submission, and the submission itself in its entirety for the purpose of making this certification and/or declaration, and have concluded that it is true, accurate and complete in every respect. I further certify and/or declare that I am fully responsible for its content to the fullest extent allowable by law."

Upon a determination by EPA, following its receipt of the aforesaid sworn statement and report, that the Work required pursuant to this Order has been fully carried out in accordance

with this Order, EPA shall so notify Respondents in writing. Such notification shall not affect any continuing obligations of Respondents, including retaining Site records. If EPA determines that any removal activities as set forth in the Description of Work section have not been completed in accordance with this Order, EPA will notify Respondents, provide a list of the deficiencies, and require that Respondents correct such deficiencies. Failure by Respondents to correct such deficiencies shall be a violation of this Order.

94. At the time of completion of all activities required by this Order, demobilization shall include sampling and proper disposal or decontamination of protective clothing, remaining laboratory samples, and any equipment or structures constructed to facilitate the Work hereunder.

XVII. SEVERABILITY

95. If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated or determined to be subject to a sufficient cause defense by the court's order.

XVIII. EFFECTIVE DATE

96. This Order shall become effective on the date of its receipt by counsel for Respondents. All times for performance of actions or activities required herein will be calculated from said effective date.

97. By signing and taking actions under this Order, Respondents do not necessarily agree with the Findings of Fact and Conclusions of Law and Determinations contained herein. Respondents do not admit any legal liability or waive any defenses or causes of action with respect to issues addressed in this Order, except as otherwise provided in this Order. However, Respondents agree not to contest the authority or jurisdiction of the Regional Administrator of EPA Region II to issue this Order, and Respondents also agree not to contest the validity or terms of this Order in any action to enforce its provisions.

U.S. ENVIRONMENTAL PROTECTION AGENCY

JEANNE M. FOX
Regional Administrator
U.S. Environmental Protection Agency
Region II

8/25/88
Date of Issuance

700079

CONSENT

Respondent Chessco Industries, Inc. has had an opportunity to confer with EPA to discuss the terms and the issuance of this Order and hereby consents to the issuance of this Order and to its terms. Furthermore, the individual signing this Order on behalf of said Respondent certifies that he or she is fully and legally authorized to agree to the terms and conditions of this Order and to bind Respondent.

Jeffrey Radler
(signature)

8-25-95
DATE

JEFFREY RADLER
(printed name of signatory)

PRESIDENT
(title of signatory)

700080

CONSENT

Respondent Anchor Lith/Kem Ko., Inc. has had an opportunity to confer with EPA to discuss the terms and the issuance of this Order and hereby consents to the issuance of this Order and to its terms. Furthermore, the individual signing this Order on behalf of said Respondent certifies that he or she is fully and legally authorized to agree to the terms and conditions of this Order and to bind Respondent.

WMP
(signature)

9/14/95
DATE

William Plankowski
(printed name of signatory)

VP GM IPD
(title of signatory)

700081

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

IN THE MATTER OF THE ANCHOR CHEMICAL SITE K.B. Co., Respondent. Proceeding under Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, 42 U.S.C. § 9606(a).	ADMINISTRATIVE ORDER Index Number II-CERCLA-95-0209

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Order ("Order") is issued to the above-captioned Respondent (hereinafter referred to as "Respondent") and provides for the performance of a removal action by Respondent at the Anchor Chemical Site ("Site"), which is located at 500 West John Street Hicksville, Nassau County, New York. This Order requires Respondent to conduct the removal action described herein to abate an imminent and substantial endangerment to the public health, welfare, or the environment that may be presented by the actual or threatened release of hazardous substances at or from the Site.

2. This Order is issued pursuant to the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a), and delegated to the Administrator of EPA on January 23, 1987, by Executive Order No. 12580 (52 Federal Register 2926, January 29, 1987) and further delegated to the EPA Regional Administrators.

3. EPA has notified the New York State Department of Environmental Conservation ("NYSDEC") of this Order pursuant to Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

II. DEFINITIONS

4. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or its implementing regulations. Whenever terms listed below are used in this Order or in an attachment to this Order, the following definitions shall apply:

a. "Day" means a calendar day unless otherwise expressly stated. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal Holiday, the period shall run until the close of business on the next working day.

b. "Hazardous substance" shall have the meaning provided in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

c. "Party" or "Parties" means the United States Environmental Protection Agency and/or Respondent K.B. Co.

d. "Waste" means (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any "pollutant or contaminant" under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of the Resource Conservation and Recovery Act, 42 U.S.C. § 6903(27); and (4) any mixture containing any of the constituents noted in (1), (2) or (3), above.

e. "Work" means all work and other activities required by and pursuant to this Order.

III. FINDINGS OF FACT AND CONCLUSIONS OF LAW

5. The Anchor Chemical Corporation site ("Site") includes the former Anchor Chemical Corporation facility ("Facility") which is approximately 1.5 acres in size and is located at 500 West John Street in Hicksville, Nassau County, New York. The Facility constitutes a facility, as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9). The Site includes a building where chemical blending and packaging operations were conducted.

6. Respondent is a "person" within the meaning of Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

7. The Site is included on the National Priorities List ("NPL") of known or threatened releases of hazardous substances, codified at 40 C.F.R. Part 300, Appendix B, as established pursuant to Section 105(a)(8)(B) of CERCLA, 42 U.S.C. § 9605(a)(8)(B).

8. The Site is currently owned by K.B. Co., a New York partnership, and was formerly owned by Kobar Construction, Inc. ("Kobar"), a corporation which was organized and existing by virtue of the laws of the State of New York.

9. Anchor/Lith-Kem Ko, Inc., a Delaware corporation, is a successor corporation to its predecessor of the same name, Anchor/Lith Kem-ko, Inc., a New York corporation. Earlier predecessor corporations include Chessco Industries and Anchor Chemical Corporation (all of which are hereinafter collectively

referred to as "Anchor"). Between the years of 1964 and 1984, Anchor was the only lessee and operator at the Site and engaged in the blending and packaging of chemicals for the graphic arts industry. Such activity involved the storage and/or disposal of hazardous substances.

10. In December of 1990, Anchor/Lith-Kem Ko, Inc. was purchased by International Paper Company, a New York corporation. Anchor/Lith-Kem Ko, Inc. continues to exist as a subsidiary of its parent, International Paper Company.

11. Documentation from inspections conducted at the Site in 1977 by the Nassau County Department of Health ("NCDH"), as well as meetings between Anchor and NCDH, indicate that during the production, mixing, and deliveries of chemicals, spillage occurred which contaminated drywells at the Site. Samples taken on July 27, 1977 from a drywell at the north end of the Facility contained concentrations of 1,1,1-trichloroethane at 2,500 parts per billion ("ppb"), trichloroethylene at 15,000 ppb, and tetrachloroethylene at 20,000 ppb.

12. On August 6, 1981, in response to a notice of violation issued by the office of the Nassau County Fire Marshal ("NCFM") in May of 1981, fourteen of the seventeen underground storage tanks at the Site were tested using the "air over product" procedure. The aforementioned storage tanks have storage capacities ranging from 550 to 4000 gallons and are buried two feet below grade within the Facility at the Site. The results of the tests indicated that five of the fourteen tanks tested were leaking. Since that date, EPA has overseen work confirming the decommissioning of all tanks at the facility, and subsequent sampling has confirmed that the releases which occurred from the tanks do not pose an unacceptable risk. Also, sampling of dry wells located at the Site have revealed elevated levels of chromium, lead and organic compounds. Various drywells were installed at the Facility between 1964 and 1968. Four dry wells at the Site which have been identified as requiring action and are the subject of this Order.

13. Records available to EPA depicting the chemical storage tanks at the Site as of 1965 and as of February 4, 1975 indicate that 1,1,1-trichloroethane was stored in one of the five tanks which were identified as leaking during the NCFM tests conducted on August 6, 1981.

14. In 1982, Anchor retained Lockwood, Kessler and Bartlett, Inc. ("LKB"), a consulting engineering firm, to install three monitoring wells and conduct periodic groundwater monitoring of said wells at the Site. Soil samples collected during the well installation and analyzed by NCDH indicated the presence of methylene chloride and 1,1,1-trichloroethane in the soil.

15. Sampling and analysis of the groundwater from the three monitoring wells was performed by the NCDH in September 1982. NCDH's analysis of samples from monitoring well #1 ("MW#1"), located in the northeast corner of the Facility, indicated the following compounds above 5 ppb in concentration: (a) methylene chloride, (b) 1,1-dichloroethylene, (c) 1,1-dichloroethane, (d) 1,1,1-trichloroethane, (e) trichloroethylene, and (f) tetrachloroethylene. NCDH's analysis of samples from monitoring well #2 ("MW#2"), located in the southeast corner of the Facility, and monitoring well #3 ("MW#3"), located in the southwest corner of the Facility, indicated the same compounds as stated above, also at concentrations in excess of 5 ppb. In addition, they indicated 1,2-dichloroethylene, chloroform, and 1,2-dichloroethane in concentrations above 5 ppb. Concentrations of 1,1,1-trichloroethane as high as 11,000 ppb were indicated in analyses of samples from MW#3. These levels were confirmed during a second round of sampling by NCDH which was conducted on December 14, 1982.

16. LKB analyzed groundwater samples from MW#1, MW#2, and MW#3 on several occasions, including December 1982, June 1983, January, July, and November of 1984, and February 1985. The December 1982 analyses confirmed the NCDH sampling results. Sampling results subsequent to the December 1982 have indicated that contaminant concentrations recorded from the three wells at the Site have decreased over time.

17. The New York State Department of Health adopted 5 ppb as the drinking water standard for principal organic contaminants ("POCs"). Such compounds, as identified in Paragraph 15, with the exception of chloroform, are POCs and have been found to be present at the Site at levels which exceed 5 ppb. In addition, NYSDEC has established groundwater standards for 1,1,1-trichloroethane (50 ppb), tetrachloroethylene (0.7 ppb), trichloroethylene (10 ppb), 1,1-dichloroethylene (0.07 ppb), 1,1-dichloroethane (50 ppb), 1,2-dichloroethylene (50 ppb), and 1,2-dichloroethane (0.8 ppb), all of which have been exceeded at the Site. Furthermore, several of the compounds which are or have been found to be present at the Site exceed maximum contaminant levels ("MCLs"), promulgated pursuant to the Safe Drinking Water Act, 42 U.S.C. §§ 300f-300j-11. These contaminants are 1,1,1-trichloroethane (MCL 200 ppb), trichloroethylene (MCL 5 ppb), 1,1-dichloroethylene (MCL 7 ppb) and 1,2-dichloroethane (MCL 5 ppb).

18. Compounds found to have been present in sampling conducted at the Site, including, tetrachloroethylene, 1,1,1-trichloroethane, and trichloroethylene, are hazardous substances within the meaning of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

19. The presence of hazardous substances at the Site as indicated in sampling data referred to in this Order constitutes

a "release" within the meaning of Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

20. Respondent is the "owner" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1)(a).

21. Anchor/Lith-Kem Ko, Inc. and Chessco Industries are former "operators" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

22. On June 2, 1989, the Acting Regional Administrator of Region II of EPA issued Administrative Order on Consent, Index Number II CERCLA-90208, to K.B. Co. with respect to this Site. That Consent Order required that K.B. Co. undertake a Remedial Investigation and Feasibility Study ("RI/FS") at the Site.

23. On August 3, 1989, the Acting Regional Administrator of Region II of EPA issued Administrative Order, Index Number II CERCLA-90215, to Chessco Industries, Inc., requiring it to participate and cooperate in the RI/FS being performed at the Site. That order was issued unilaterally pursuant to Section 106 of the CERCLA, 42 U.S.C. § 9606.

24. In March of 1992, the Regional Administrator of Region II of EPA issued Administrative Order, Index Number II CERCLA-20205, to Anchor/Lith-Kem Ko, Inc. directing it to participate and cooperate in the performance of the RI/FS being performed at the Site. That order was issued unilaterally pursuant to Section 106 of the CERCLA, 42 U.S.C. § 9606.

25. Consistent with the administrative orders, a Remedial Investigation and Feasibility Study ("RI/FS") was conducted in order to determine the nature and extent of the release or threatened release of hazardous substances at and from the Site and to evaluate remedial alternatives for the Site. During the RI/FS, the underground storage tanks at the Site were decommissioned.

26. Anchor/Lith-Kem Ko, Inc. and Chessco Industries have consented to the issuance of an administrative order, Index Number II CERCLA-94-0220, regarding the removal of sediments from certain of the drywells at the Site which are the subject of this Order. The consent order is being issued concurrently with the issuance of this Order.

27. As set forth in paragraph 15, and as indicated in the sediment and groundwater sample data obtained during the RI, drywell contamination exists at the Site and it is a potential source of continuing contamination to the groundwater. Analyses of sediment samples, which were collected during the RI, revealed

levels of lead, chromium and 1,1,1-trichloroethane (1,1,1-TCA) at 1,620 parts per million ("ppm"), 463 ppm, and 3.3 ppm, respectively, in Drywells 2, 3, 6, and 8. Analyses of groundwater samples, also collected during the RI, revealed concentrations of lead, chromium and 1,1,1-TCA at 240 ppb, 1440 ppb and 29 ppb, respectively, in monitoring wells 1D, 2, 3, 5S and 5D. These levels exceed the federal action level for lead (15 ppb) and New York State's maximum contaminant levels for chromium (50 ppb) and 111-TCA (5 ppb). These exceedences are the subject of this removal action.

28. Respondent has been given the opportunity to discuss with EPA the basis for issuance of this Order and its terms.

IV. DETERMINATIONS

29. The conditions present at the Site constitute a threat to public health, welfare, or the environment based upon factors set forth in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP").

30. The actual or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health, welfare, or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

31. The actions required by this Order are necessary to protect the public health or welfare or the environment, are in the public interest, and are not inconsistent with CERCLA or the NCP.

V. ORDER

32. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and other information available to EPA, it is hereby ordered and agreed that Respondent shall undertake a response action at the Site in accordance with the requirements specified below. All activities specified below shall be initiated and completed as soon as possible even though maximum time periods for their completion are specified herein.

Designation of Contractor and Project Coordinator

33. Within five (5) days after the effective date of this Order, Respondent shall propose a Project Coordinator who shall be responsible for administration of all Respondent's actions required by the Order. Respondent shall submit the proposed Project Coordinator's name, address, telephone number, and qualifications to EPA. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site work. EPA retains the right to disapprove of any Project Coordinator proposed by Respondent. If EPA disapproves

of a proposed Project Coordinator, Respondent shall propose a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within five (5) working days following EPA's disapproval. Receipt by Respondent's approved Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondent. Respondent may change its designated Project Coordinator, subject to approval by EPA as set forth in this paragraph. Respondent shall notify EPA seven (7) working days before such a change is made. The initial notification may be made orally but it shall be promptly followed by a written notice.

34. Respondent shall perform the work required by this Order or retain a contractor to perform the work. If that contractor is not the same individual as the Project Coordinator, Respondent shall notify EPA of the name and qualifications of the proposed contractor within five (5) working days of the effective date of this Order. Respondent shall also notify EPA of the name and qualifications of any other contractor or subcontractor proposed to perform work under this Order at least ten (10) days prior to commencement of such work.

35. EPA retains the right to disapprove of any of the contractors and/or subcontractors proposed by Respondent to conduct the work. If EPA disapproves of Respondent's proposed contractor to conduct the work, Respondent shall propose a different contractor within five (5) working days of EPA's disapproval.

36. a. Respondent shall provide a copy of this Order to each contractor and subcontractor approved and retained to perform the work required by this Order. Respondent shall include in all contracts or subcontracts entered into for work required under this Order provisions stating that such contractors or subcontractors, including its agents and employees, shall perform activities required by such contracts or subcontracts in compliance with this Order and all applicable laws and regulations. Respondent shall be responsible for ensuring that its contractors and subcontractors perform the work contemplated herein in accordance with this Order.

b. Respondent shall make best efforts to coordinate in the performance of the Work required by this Order with any person not a party to this Order who is directed by EPA and who offers to perform or, in lieu of performance, to pay for all or part of the Work required by this Order. Best efforts to coordinate shall include, at a minimum:

i. replying in writing within a reasonable period to offers to perform or pay for the Work required by this Order;

ii. engaging in good-faith negotiations with any person not a party to this Order who offers to perform or pay for the Work required by this Order; and

iii. good-faith consideration of good-faith offers to perform or pay for the Work required by this Order.

37. All activities required of Respondents under the terms of this Order shall be performed only by well-qualified persons possessing all necessary permits, licenses, and other authorizations required by federal, state, and local governments, and all work conducted pursuant to this Order shall be performed in accordance with prevailing professional standards.

38. Respondents shall direct all submissions required by this Order to the EPA On-Scene Coordinator by certified mail at the address provided in paragraph 45, below.

Description of Work

39. Within thirty (30) days of the effective date of this Order, Respondents shall submit to EPA for review and approval a detailed work plan ("Work Plan") containing, at a minimum, the plans and information specified below.

a. A Removal Plan describing the procedures that Respondents shall utilize to accomplish the Work in compliance with this Order, including:

i. removal of any liquid, sediments, and soils from the bottom of dry wells 2, 3, 6, and 8;

ii. excavation of sediments and soils to a depth of two (2) feet below the bottom edge of the concrete rings and obtaining a representative sample from the remaining soils in each dry well. The excavation can be terminated should slumping soil conditions prohibit completing the excavation; and

iii. securing the completed excavations by backfilling with clean fill material (e.g. washed pea gravel).

b. a Work Plan organization identifying who will be performing the required tasks;

c. a plan for the removal, containerization, staging, and disposal of excavated materials;

d. a plan for mapping dry wells 2, 3, 6 and 8, on-Site work and safety zones and sample locations;

e. a Decontamination Plan;

f. project management and coordination;

g. a detailed Implementation Schedule;

h. progress and final reporting;

i. a Sampling and Analysis Plan;

j. a Site Health and Safety Plan ("HASP") which will address all Site activities for the protection of on-site workers and the nearby population. The HASP shall conform with both the Occupational Safety and Health Administration regulations, 29 CFR 1910, and EPA guidance document entitled "Standard Safety Guide", OSWER Directive 9285.1-03, dated June 1992.

k. a Site specific quality assurance/quality control ("QA/QC") plan for the performance of sampling and analysis. The QA/QC plan shall be in conformance with the EPA publication entitled "Test Methods for Evaluating Solid Waste (SW-846), 3rd ed.", and the EPA document entitled "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans" (QAMS -005/80). Sampling and analysis shall also conform to QA/QC protocols, including EPA guidance document entitled "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures", OSWER Directive No. 9360.4-01, April 1990.

40. EPA may approve, disapprove, require revisions to, or modify the Work Plan. If EPA requires revisions, Respondents shall submit a revised draft Work Plan within ten (10) days of receipt of EPA's notification of the required revisions. Respondents shall implement the Work Plan as finally approved in writing by EPA in accordance with the schedule approved by EPA.

41. If, during the performance of any phase of the approved Work Plan, EPA or Respondent deems it necessary to alter the tasks specified in the Work Plan, Respondent shall submit to EPA for review and approval any proposed amendments to the Work Plan prior to performing the Work.

42. Within ten (10) days after EPA's approval of the Work Plan, Respondent shall commence implementation of the Work Plan in accordance with the terms and schedule therein and in accordance with this Order.

43. Respondent shall allow EPA or its authorized representatives to take split and/or duplicate samples of any samples collected by Respondent while performing work under this Order. Respondent shall notify EPA not less than ten (10) days in advance of any sample collection activity, unless EPA expressly authorizes to the contrary. EPA or its authorized representatives shall have

the right to take any additional samples that they deem necessary.

Reporting

44. The Work Plan, Work Plan amendments, the Removal Report as described in paragraph 46, below, and other documents submitted by Respondent to EPA which purport to document Respondent's compliance with the terms of this Order shall be signed by a responsible official of Respondent. For purposes of this Order, a responsible official is an official who is in charge of a principal business function.

45. The Work Plan, Work Plan amendments, the Removal Report, and other documents required to be submitted to EPA under this Order shall be sent to the following addressees:

2 copies to:

Removal Action Branch
United States Environmental Protection Agency
2890 Woodbridge Avenue, Building 209
Edison, New Jersey 08837

Attn: Anchor Chemical OSC

1 copy to:

Chief, New York/Caribbean Superfund Branch II
United States Environmental Protection Agency
290 Broadway, 20th Floor
New York, New York 10007-1866

Attention: Anchor Chemical Project Manager

1 copy to:

Chief, New York/Caribbean Superfund Branch
Office of Regional Counsel
United States Environmental Protection Agency
290 Broadway, 17th Floor
New York, New York 10007-1866

Attention: Anchor Chemical Site Attorney

2 copies to:

Michael O'Toole, P.E.
Director, Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road, Room 212
Albany, New York 12233-7010

Attention: Anchor Chemical Site

46. Within thirty (30) days of completion of all field activities, Respondent shall submit to EPA for review and approval a Removal Report summarizing the actions taken to comply with this Order. The Removal Report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." Within thirty (30) days after EPA's receipt of the Removal Report, Respondent shall submit to EPA a Removal Report Addendum which will include all QA/QC documentation, including chain of custody and data validation records. The Removal Report shall include:

a. a synopsis of all work performed under this Order;

b. a detailed description of any EPA-approved modifications to the Work Plan which occurred during Respondent's performance of the Work required under this Order;

c. a listing of quantities and types of materials removed from the Site or handled on-Site;

d. a discussion of removal and disposal options considered for those materials;

e. a listing of the ultimate destination of those materials;

f. a presentation of the analytical results of all sampling and analyses performed, and

g. accompanying appendices containing all relevant documentation generated during the work (e.g., manifests, invoices, bills, contracts, and permits).

47. The Removal Report shall also include the following certification signed by a person who supervised or directed the preparation of that report:

> "Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am

aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

48. At the time of completion of all activities required by this Order, demobilization shall include sampling if deemed necessary by EPA, and proper disposal or decontamination of protective clothing, remaining laboratory samples taken pursuant to this Order, and any equipment or structures constructed to facilitate the cleanup.

On-scene Coordinator, Other Personnel, and Modifications to EPA-Approved Work Plan

49. All activities required of Respondent under the terms of this Order shall be performed only by qualified persons possessing all necessary permits, licenses, and other authorizations required by federal, state, and local governments, and all work conducted pursuant to this Order shall be performed in accordance with prevailing professional standards.

50. The current EPA On-Scene Coordinator ("OSC") for the Site is Akhil Verma, Removal Action Branch, Emergency and Remedial Response Division, U.S. Environmental Protection Agency, 2890 Woodbridge Avenue, Building 209 (MS-211), Edison, N.J. 08837, (908) 321-4459. EPA will notify the Project Coordinator if EPA's On-Scene Coordinator should change.

51. EPA, including the OSC, will conduct oversight of the implementation of this Order. The OSC shall have the authority vested in an OSC by the NCP, including the authority to halt, conduct, or direct any work required by this Order, or to direct any other response action undertaken by EPA or Respondent at the Site consistent with the objectives of paragraph 39 of this Order. Absence of the OSC from the Site shall not be cause for stoppage of work unless specifically directed by the OSC.

52. As appropriate during the course of implementation of the actions required of Respondent pursuant to this Order, Respondent or its contractors or subcontractors, acting through the Project Coordinator, may confer with EPA concerning the required actions. Based upon new circumstances or new information not in the possession of EPA on the date of this Order, the Project Coordinator may request, in writing, EPA approval of modification(s) to the EPA-approved Work Plan. Only modifications approved by EPA in writing shall be deemed effective. Upon approval by EPA, such modifications shall be deemed incorporated in this Order and shall be implemented by Respondent.

Plans and Reports Requiring EPA Approval

53. If EPA disapproves or otherwise requires any modifications to any plan, report, or other item required to be submitted to EPA for approval pursuant to this Order, Respondent shall have fourteen (14) days from the receipt of notice of such disapproval or the required modifications to correct any deficiencies and resubmit the plan, report, or other written document to EPA for approval, unless a shorter or longer period is specified in the notice. Any notice of disapproval will include an explanation of why the plan, report, or other item is being disapproved. Respondent shall address each of the comments and resubmit the plan, report, or other item with the required changes as stated above. At such time as EPA determines that the plan, report, or other item is acceptable, EPA will transmit to Respondent a written statement to that effect.

54. If any plan, report, or other item required to be submitted to EPA for approval pursuant to this Order is disapproved by EPA, including a resubmittal following Respondent's receipt of EPA's comments on the initial submittal, Respondent may be deemed to be out of compliance with this Order. If any resubmitted plan, report, or other item, or portion thereof, is disapproved by EPA, EPA may again direct Respondent to make the necessary modifications thereto, and/or EPA may amend or develop the item(s) and recover the costs from Respondent of doing so. Respondent shall implement any such item(s) as amended or developed by EPA.

55. EPA shall be the final arbiter in any dispute regarding the sufficiency or acceptability of all documents submitted and all activities performed pursuant to this Order. EPA may unilaterally modify those documents and/or perform or require the performance of additional work consistent with the objectives of paragraph 39 of this Order.

56. All plans, reports and other submittals required to be submitted to EPA pursuant to this Order, upon approval by EPA, shall be deemed incorporated into and an enforceable part of this Order.

Oversight

57. During the implementation of the requirements of this Order, Respondent and its contractor(s) and subcontractors shall be available for such conferences with EPA and inspections by EPA or its authorized representatives as EPA may determine are necessary to adequately oversee the work being carried out or to be carried out by Respondent, including inspections at the Site and at laboratories where analytical work is being performed hereunder.

58. Respondent and its employees, agents, contractor(s) and subcontractors shall cooperate with EPA in its efforts to oversee Respondent's implementation of this Order.

Community Relations

59. Respondent shall cooperate with EPA in providing information relating to the work required hereunder to the public. As requested by EPA, Respondent shall participate in the preparation of all appropriate information disseminated to the public, and participate in public meetings which may be held or sponsored by EPA to explain activities at or concerning the Site.

Access to Property and Information

60. EPA, and its designated representatives, including, but not limited to, employees, agents, contractor(s) and subcontractors thereof, shall be permitted to observe the Work carried out pursuant to this Order. Respondent shall at all times permit EPA, its designated representatives, and NYSDEC full access to and freedom of movement at the Site and any other premises where Work under this Order is to be performed for purposes of inspecting or observing Respondent's progress in implementing the requirements of this Order, verifying the information submitted to EPA by Respondent, conducting investigations relating to contamination at the Site, or for any other purpose EPA determines to be reasonably related to EPA oversight of the implementation of this Order.

61. In the event that action under this Order is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain access agreements from the present owners for purposes of implementing the requirements of this Order. Such agreements shall provide access not only for Respondent, but also for EPA and its designated representatives or agents, as well as NYSDEC and its designated representatives or agents. Such agreements shall specify that Respondent is not EPA's representatives with respect to liability associated with Site activities. If such access agreements are not obtained by Respondent such that the work cannot be performed on schedule, Respondent shall immediately notify EPA of its failure to obtain access and include in that notification a summary of the steps Respondent has taken to attempt to obtain access. Subject to the United States' non-reviewable discretion, EPA may use its legal authorities to obtain access for Respondent, may perform those response actions with EPA contractors at the property in question, or may terminate the Order if Respondent cannot obtain access agreements. If EPA performs those tasks or activities with EPA contractors and does not terminate the Order, Respondent shall perform all other activities not requiring access to that

property. Respondent shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables.

62. All data, information, and records created, maintained, or received by Respondent or its contractor(s) or subcontractors in connection with implementation of the Work under this Order, including, contractual documents, invoices, receipts, work orders and disposal records shall be made available to EPA upon request, subject to the attorney-client or work product privilege. EPA shall be permitted to copy all such documents. Respondent shall submit to EPA upon receipt the results of all sampling or tests and all other technical data generated by Respondent or its contractor(s), or on the Respondent's behalf, in connection with the implementation of this Order.

63. Upon request by EPA, Respondent shall provide EPA or its designated representatives with duplicate and/or split samples of any material sampled in connection with the implementation of this Order.

64. Notwithstanding any other provision of this Order, EPA hereby retains all of its information gathering, access, and inspection authority under CERCLA, RCRA, and any other applicable statute or regulations.

Record Retention, Documentation, Availability of Information

65. Respondent shall preserve all documents and information relating to Work performed under this Order, or relating to the hazardous substances found on or released from the Site, for six years after completion of the Work required by this Order. At the end of the six year period, Respondent shall notify EPA at least thirty (30) days before any such document or information is destroyed that such document or information is available for inspection. Upon request, Respondent shall provide EPA with the originals or copies of such documents and information.

66. All documents submitted to EPA by Respondent in the course of implementing this Order shall be available to the public unless identified as confidential by Respondent pursuant to 40 CFR Part 2, Subpart B, and determined by EPA to merit treatment as confidential business information in accordance with applicable law. In addition, EPA may release all such documents to NYSDEC, and NYSDEC may likewise make those documents available to the public unless Respondent conforms with applicable New York law and regulations regarding confidentiality. Respondent shall not assert a claim of confidentiality regarding any monitoring or hydrogeologic data, any information specified under Section 104(e)(7)(F) of CERCLA, or any other chemical, scientific or engineering data relating to the Work performed hereunder.

Off-Site Shipments

67. All hazardous substances, pollutants, or contaminants removed from the Site pursuant to this Order for off-site treatment, storage, or disposal shall be treated, stored, or disposed of in compliance with (a) Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), (b) the EPA "Revised Procedures for Implementing Off-Site Response Actions," OSWER Directive Number 9834.11, November 13, 1987, (c) the EPA "Superfund Removal Procedures" (OSWER 1988), (d) RCRA, (e) the Toxic Substances Control Act ("TSCA"), 15 U.S.C. § 2601-2625, and (f) all other applicable federal and state requirements.

68. If hazardous substances from the Site are to be shipped outside of New York State, Respondent shall provide prior notification of such out-of-state waste shipments in accordance with OSWER Directive 9330.2-07. At least five (5) working days prior to out-of-state waste shipments, Respondent shall notify the environmental agency of the accepting state of the following: (a) the name and location of the facility to which the wastes are to be shipped; (b) the type and quantity of waste to be shipped; (c) the expected schedule for the waste shipments; (d) the method of transportation and name of transporter; and (e) the treatment and/or disposal method of the waste streams.

69. Certificates of destruction must be provided to EPA upon Respondent's receipt of such. These certificates must be included in the biweekly progress reports or,, if not received in a timely manner, the Removal Report.

Compliance With Other Laws

70. All actions required pursuant to this Order shall be performed in accordance with all applicable local, state, and federal laws and regulations except as provided in CERCLA 121(e)(1) of CERCLA, 42 U.S.C. § 9621(e)(1), and 40 CFR § 300.415(i). In accordance with 40 CFR § 300.415(i), all on-Site actions required pursuant to this Order shall, to the extent practicable, as determined by EPA, considering the exigencies of the situation, attain applicable or relevant and appropriate requirements ("ARARs") under federal environmental or state environmental or facility siting laws. (See "Superfund Removal Procedures: Guidance on the Consideration of ARARs During Removal Actions," OSWER Directive No. 9360.3-02, August 1991).

71. Except as provided in Section 121(e)(1) of CERCLA, 42 U.S.C. § 9621(e)(1), and the NCP, no permit shall be required for any portion of the Work required hereunder that is conducted entirely on-Site. Where any portion of the Work requires a federal or state permit or approval, Respondent shall submit timely applications and shall take all other actions necessary to obtain and to comply with all such permits or approvals. This Order is

not, nor shall it be construed to be, a permit issued pursuant to any federal or state statute or regulation.

Emergency Response and Notification of Releases

72. Upon the occurrence of any event during performance of the Work required hereunder which, pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, requires reporting to the National Response Center [(800) 424-8802], Respondent shall immediately orally notify the Chief of the Removal Action Branch of the Emergency and Remedial Response Division of EPA, Region II, at (908) 321-6621, or the EPA Region II Emergency 24-hour Hot Line at (908) 548-8730, of the incident or Site conditions. Respondent shall also submit a written report to EPA within seven (7) days after the onset of such an event, setting forth the events that occurred and the measures taken or to be taken, if any, to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. The reporting requirements of this paragraph are in addition to, not in lieu of, reporting under Section 103 of CERCLA, 42 U.S.C. § 9603, and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004.

73. In the event of any action or occurrence during Respondent's performance of the requirements of this Order which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action to prevent, abate, or minimize the threat and shall immediately notify EPA as provided in the preceding paragraph. Respondent shall take such action in accordance with applicable provisions of this Order, including the Health and Safety Plan. In the event that EPA determines that (a) the activities performed pursuant to this Order, (b) significant changes in conditions at the Site, or (c) emergency circumstances occurring at the Site pose a threat to human health or the environment, EPA may direct Respondent to stop further implementation of any actions pursuant to this Order or to take other and further actions reasonably necessary to abate the threat.

74. Nothing in the preceding paragraph shall be deemed to limit any authority of the United States to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

General Provisions

75. This Order applies to and is binding upon Respondent and its successors and assigns. Any change in the ownership or corporate status of Respondent, including any transfer of assets of real or

personal property, shall not alter the responsibilities that Respondent has under this Order.

76. Respondent is jointly and severally responsible for carrying out the activities as required by this Order. Compliance or noncompliance by another party to an order related to response activities at the Site shall not excuse or justify noncompliance by Respondent to this Order.

77. Respondent shall provide a copy of this Order to any prospective owners or successors before a controlling interest in Respondent's assets, property rights, or stock are transferred to such a prospective owner or successor.

78. No informal advice, guidance, suggestion, or comment by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by the Respondent shall relieve Respondent of its obligation to obtain such formal approval as may be required by this Order and to comply with all requirements of this Order unless it is formally modified.

79. Any delay by Respondent in performance of this Order that, in EPA's judgment, is not properly justified under the terms of paragraph 80, below, shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondent's obligations to perform all obligations fully under the terms and conditions of this Order.

80. Respondent shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's OSC within forty-eight (48) hours after Respondent first knew or should have known that a delay might occur. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Within five (5) business days after notifying EPA by telephone, Respondent shall provide written notification fully describing the nature of the delay, any justification for the delay, any reason why Respondent should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that have been or will be taken to mitigate the effect of the delay. Increased cost or expense associated with the implementation of the activities called for in this Order is not a justification for any delay in performance.

Enforcement and Reservation of Rights

81. Notwithstanding any other provision of this Order, failure to comply with any provision of this Order may subject Respondent to civil penalties of up to twenty-five thousand dollars ($25,000) per violation per day, as provided in Section 106(b)(1)

of CERCLA, 42 U.S.C. § 9606(b)(1). Respondent may also be subject to punitive damages in an amount at least equal to and not more than three times the amount of any costs incurred by the United States as a result of such failure to comply with this Order, as provided in Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Should Respondent violate this Order or any portion thereof, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

82. Nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondent under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order or the Site.

Other Claims

83. By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent or its employees, agents, contractors, or subcontractors in carrying out any action or activity pursuant to this Order. The United States or EPA shall not be held out as or deemed a party to any contract entered into by Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or subcontractors in carrying out actions pursuant to this Order.

84. Nothing in this Order constitutes or shall be construed as a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Order for any liability that Respondent or other persons may have under CERCLA, other statutes, or common law, including any claims of the United States for injunctive relief, costs, damages, and interest under Sections 106(a) and 107 of CERCLA, 42 U.S.C. §§ 9606(a) and 9607. Nothing herein shall constitute a finding that Respondent is the only responsible party with respect to the release or threatened release of hazardous substances at and from the Site.

85. Nothing in this Order shall affect any right, claim, interest, defense, or cause of action of any party hereto with respect to third parties.

86. Nothing in this Order shall be construed to constitute preauthorization under Section 111(a)(2) of CERCLA, 42 U.S.C. § 9611(a)(2), and 40 CFR § 300.700(d).

Insurance

87. At least seven (7) days prior to commencing any Work at the Site, Respondent shall submit to EPA a certification that Respondent or its contractors and subcontractors have adequate insurance coverage or have indemnification for liabilities for injuries or damages to persons or property which may result from the activities to be conducted by or on behalf of Respondent pursuant to this Order. Respondent shall ensure that such insurance or indemnification is maintained for the duration of the Work required by this Order.

Termination and Satisfaction

88. Following EPA's receipt of the Removal Report referred to in paragraph 46, above, EPA will make a determination as to whether that the Work required pursuant to this Order has been fully carried out in accordance with this Order, EPA will so notify Respondent as to that determination in writing.

Opportunity to Confer, Effective Date

89. This Order shall be effective six (6) days after receipt by Respondent, unless a conference is requested pursuant to paragraph 90, below. If such conference is timely requested, this Order shall become effective three (3) days following the date the conference is held unless otherwise modified by EPA. All times for performance of ordered activities shall be calculated from this effective date.

90. Respondent may, within five (5) days after receipt of this Order, request a conference with EPA to discuss this Order. If requested, the conference shall occur within five (5) days of Respondent's request for a conference unless otherwise approved by EPA.

91. The purpose and scope of the conference shall be limited to issues involving the implementation of the work required by this Order and the extent to which Respondent intends to comply with this Order. This conference is not an evidentiary hearing and does not constitute a proceeding to challenge this Order. Respondent may not seek review of this Order or seek resolution of potential liability, and no official stenographic record of

the conference will be made. At any conference held pursuant to Respondent's request, Respondent may appear in person or by an attorney or other representative.

92. A request for a conference must be made by telephone to James Doyle, Assistant Regional Counsel, Office of Regional Counsel, EPA Region II, telephone (212) 637-3165, followed by written confirmation mailed to Mr. Doyle and the OSC at the addresses set forth in paragraph 45 of this Order.

Notice of Intent to Comply

93. Respondent shall provide, not later than five (5) days after the effective date of this Order, written notice to EPA stating whether it will comply with the terms of this Order. If Respondent does not unequivocally commit to perform the work required by this Order, it shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondent's written notice shall describe detailing any "sufficient cause" defenses asserted by Respondent under Sections 106(b) and 107(c)(3) of CERCLA. The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be an acceptance of Respondent's assertions.

U.S. ENVIRONMENTAL PROTECTION AGENCY

JEANNE M. FOX
Regional Administrator
U.S. Environmental Protection Agency
Region II

8/25/95
Date of Issuance

ALLIANCE
Technologies Corporation

June 7, 1991

Cathy Moyik
Regional Project Officer
U.S. Environmental Protection Agency
Emergency and Remedial Response Division
26 Federal Plaza, Room 737
New York, NY 10278

Reference: Contract No. 68-W9-0003, TES 6
Work Assignment No. C02044
Anchor Chemical Site, Hicksville, New York
Community Relations Support

Subject: Deliverable - Revised Final Community Relations Plan

Dear Cathy:

In accordance with the reporting requirements of the subject Work Assignment, enclosed is the revised Final Community Relations Plan (CRP) for the Anchor Chemical Site, Hicksville, New York. This submittal satisfies the third deliverable requirement for this Work Assignment.

Please note this CRP is a revised version of the CRP submitted to EPA as final on April 14, 1991. Two corrections have been made: the "Enforcement Confidential" footer has been deleted and a typo was corrected in the Reference Section.

At the request of the WAM, Dorothy Allen, a copy has been delivered directly to her and four copies have been delivered to Community Relations Coordinator Cecilia Echols for distribution to the public information repositories.

Questions regarding this submission should be directed to the Alliance Project Manager, Naida Gavrelis, at (508) 970-5600 ext. 5145, or me at (212) 349-4616.

Sincerely yours,

Charles Feinberg
Regional Manager

cc: Dorothy Allen/EPA Work Assignment Manager
Cecilia Echols/EPA Community Relations Coordinator
Jill E. Robbins/TES-6 Contracting Officer (letter only)
Jack Lewis, Jr./Alliance TES-6 Contracts Manager (letter only)
Naida Gavrelis/Alliance Project Manager
PMO File

1000001

Community Relations Plan
Anchor Chemical Site
Hicksville, Nassau County, New York
Community Relations Support

Prepared for:

U.S. Environmental Protection Agency

Contract No.: 68-W9-0003

Work Assignment No.: C02044

TES-6

ALLIANCE
Technologies Corporation

COMMUNITY RELATIONS PLAN
ANCHOR CHEMICAL SITE
HICKSVILLE, NASSAU COUNTY, NEW YORK
COMMUNITY RELATIONS SUPPORT

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Emergency and Remedial Response Division
26 Federal Plaza
New York, New York 10278

Work Assignment No.:	C02044
EPA Region:	II
EPA Site/Facility I.D. No.:	NYD001485226
Contract No.:	68-W9-0003 (TES-6)
Alliance Document No.:	NY-044.CRP
Alliance Project No.:	1-635-143-0-2PG1-0
Alliance Project Manager:	Naida Gavrelis
Telephone No.:	(508) 970-5600
Subcontract No.:	N/A
Subcontract Project Manager:	N/A
Telephone No.:	N/A
EPA Work Assignment Manager:	Dorothy Allen
Telephone No.:	(212) 264-6321
Date Prepared:	June 6, 1991

ALLIANCE TECHNOLOGIES CORPORATION
291 Broadway, Suite 1206
New York, New York 10007
(212) 349-4616

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COMMUNITY RELATIONS PLAN
ANCHOR CHEMICAL SUPERFUND SITE
HICKSVILLE, NEW YORK

A. OVERVIEW OF COMMUNITY RELATIONS PLAN

This community relations plan has been developed to identify issues of community concern regarding the Anchor Chemical Superfund site in Hicksville, New York, and to present suggested community relations activities to be conducted by the U.S. Environmental Protection Agency (EPA) during Remedial Investigation and Feasibility Study (RI/FS) activities at this site. EPA conducts community relations activities to ensure that the local public has input to the decisions about Superfund actions and is well-informed about the progress of those actions. The community relations program outlined in this document is intended to keep local officials and residents informed of the investigations and provide opportunities for involvement in the process.

The community relations plan is based on interviews with local officials, and with representatives of several civic organizations in the community (a few of whom live in the vicinity of the site), and on information contained in EPA site files. Interviews were conducted in person in the Hicksville area on September 12, 1990. Community and site background information was compiled with the assistance of the Hicksville Chamber of Commerce, the Town of Oyster Bay Public Information Officer, and through reference to the literature cited at the end of this report.

Community interest in activities related to the Anchor Chemical site appears to be moderate to high. While many of the community members interviewed have just been made aware of the Anchor Chemical site, several other environmental problems exist in the Hicksville area which have heightened the environmental awareness and public health concern of area residents over the past several years. According to Town of Oyster Bay officials, these individual environmental problems have had a cumulative effect. The Anchor Chemical site is of particular concern to the community because of the potential contamination of the ground water, the drinking water source for the area.

The remainder of this plan outlines a community relations program which is specifically tailored to the concerns and needs of the Hicksville community. The following sections within this report present site and community specific information:

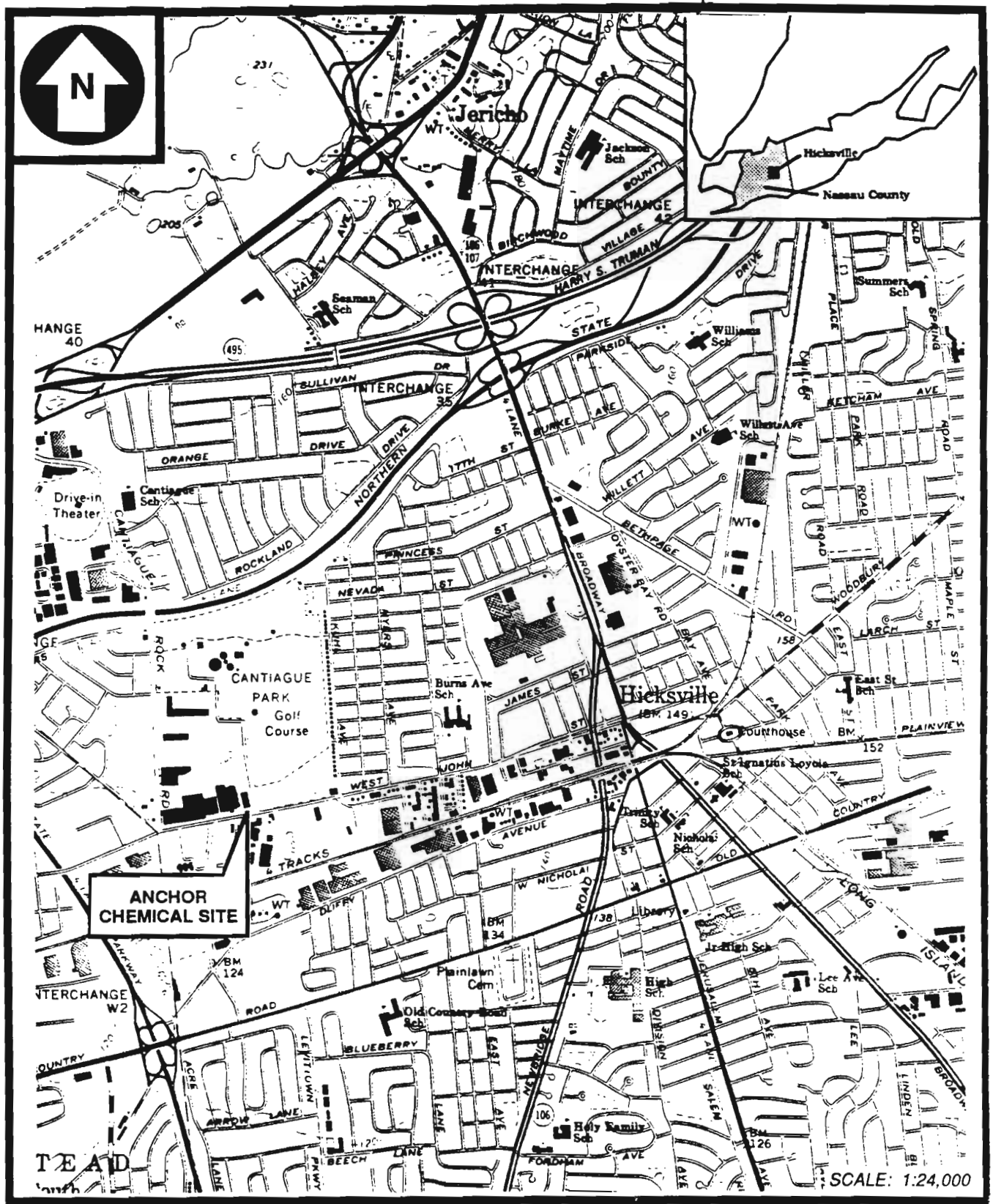
- Capsule Site Description;
- Community Background;
- Development of Community Relations Program; and
- Attachments: List of Officials, Key Contacts, and Interested Parties; Information Repositories and Suggested Meeting Locations.

B. CAPSULE SITE DESCRIPTION

The Anchor Chemical site is located at 500 West John Street in Hicksville, Nassau County, New York (see Figures 1 and 2). The approximate 1.5 acre site includes a two-story building which was operated by Anchor Chemical (1964 to 1978) and Anchor-Lith Kem Ko (1978 to 1984) who produced and mixed chemicals for the graphics arts industry. The building on the site is currently owned by Kobar Company and managed by Spiegel Associates; it houses a furniture warehouse, J&D Brauner Company.

Currently, seventeen inactive storage tanks with capacities ranging from 550 to 4,000 gallons are located two feet below the concrete floor in the northeast corner of the building (see Figure 2). These tanks stored chemicals which were used in Anchor's manufacturing process.

In May 1981, the Nassau County Fire Marshall issued a notice to Anchor-Lith Kem Ko alerting them that they were not in compliance with a local fire prevention ordinance which requires that all underground storage tanks containing flammable or combustible liquids be registered with the County Fire Marshall. Pressure tests to determine if any leaks existed were required and revealed that five of the fourteen tanks tested were leaking. These tanks were designated as Numbers 5 (naphthol spirits), 6 (acetone), 8 (mineral spirits/1,1,1-trichloroethane), 11 (isopropyl alcohol), and 15 (textile spirits). These tanks were emptied and filled with concrete slurry and abandoned in place in 1983 (Roux, 1990).



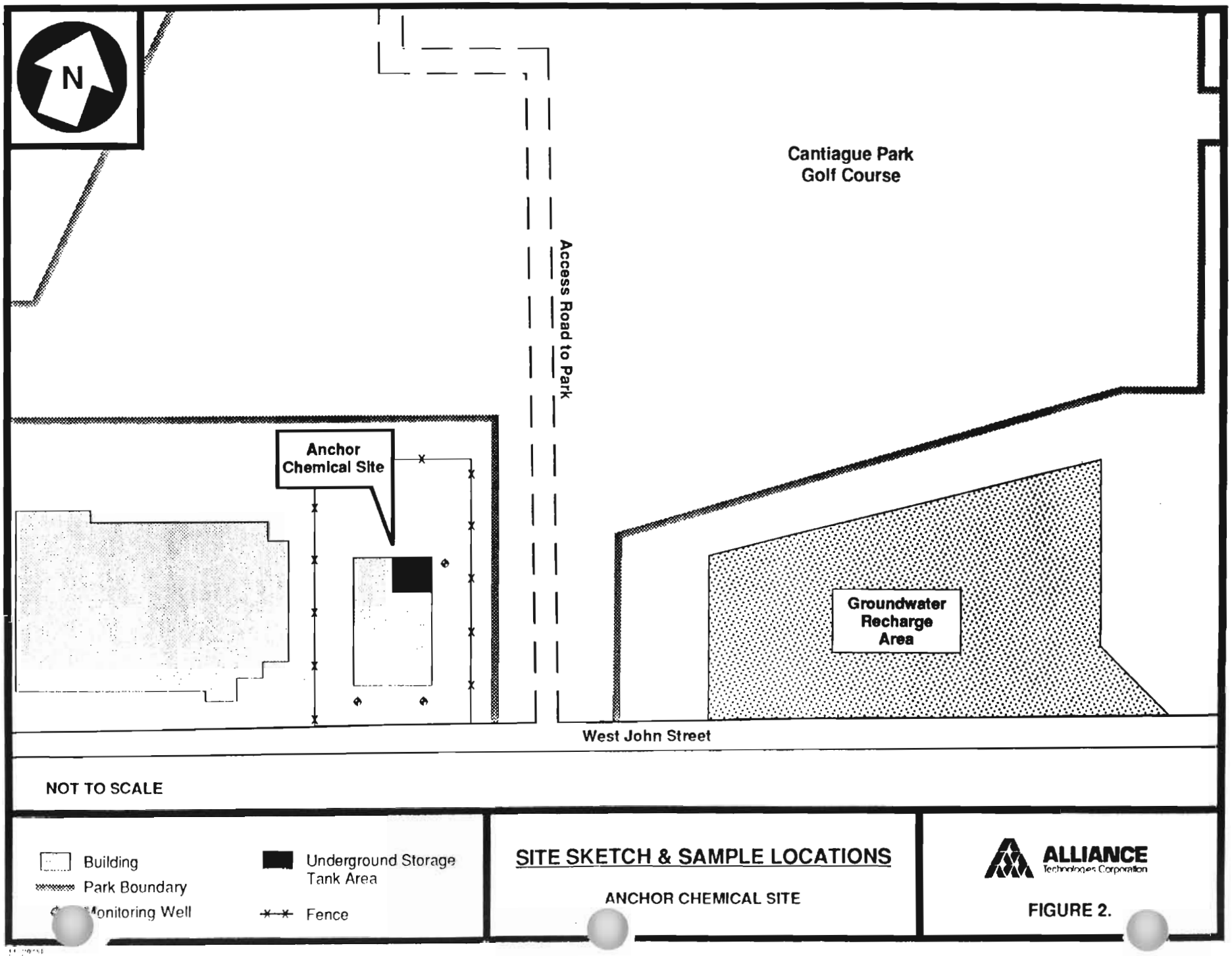
LOCATION MAP

LOCATION OF THE ANCHOR CHEMICAL SITE

ALLIANCE Technologies Corporation

FIGURE 1.

1000007


N
Cantiague Park
Golf Course
Access Road to Park
Anchor
Chemical Site
Groundwater
Recharge
Area
West John Street
NOT TO SCALE
Building
Park Boundary
Monitoring Well
Underground Storage
Tank Area
Fence
SITE SKETCH & SAMPLE LOCATIONS
ANCHOR CHEMICAL SITE
ALLIANCE
Technologies Corporation
FIGURE 2.

In 1982, the Nassau County Department of Health (NCDH) requested that Anchor-Lith Kem Ko develop a plan to determine the presence or absence of contamination due to discharges from the leaking underground storage tanks. Ground water samples collected between November 1982 and February 1985 from three wells installed on the site (see Figure 2) revealed the presence of volatile organic chemicals (VOCs) with concentrations ranging from 2 parts per billion (ppb) to 24 parts per million (ppm). VOCs are a group of chemical compounds that are characterized by their tendency to evaporate in the air from water and soil. VOCs detected to date include methylene chloride, 1,1-dichloroethylene, 1,1-dichloroethane, trichloroethylene, and tetrachloroethylene. Pressure testing of three remaining tanks indicated that tank number 3 (methylene chloride) was leaking (Roux, 1990).

In October 1984, EPA proposed the Anchor Chemical site for inclusion on the National Priorities List (NPL) of the nation's most contaminated hazardous waste sites. Placement on the NPL makes the site eligible for federal action under the Comprehensive Environmental Response Compensation and Liabilities Act (CERCLA, also known as Superfund) and the Superfund Amendments and Reauthorization Act (SARA). In June 1986, EPA finalized the listing of the Anchor Chemical site on the NPL.

The remedial investigation of the Anchor Chemical site is due to get underway in the Spring of 1991. This investigation will be conducted by Roux Associates and will include the following tasks (Roux, 1990):

- underground tank inspection;
- installation of monitoring wells and soil sampling;
- characterization of ground water and sediment;
- survey of water supply wells; and
- drilling of soil borings and sampling of soil and ground water.

C. COMMUNITY BACKGROUND

1. Community Profile

Hicksville, a community rich in history, is an unincorporated village located in the Town of Oyster Bay in Nassau County, Long Island, New York. Hicksville is part of a piece of land which was purchased from the Matinecock Indians in 1648 and is believed to have been named in the mid-1800s after a large landowner in the area, Valentine Hicks. In its earlier days, Hicksville was famous for its farmland, producing primarily cucumbers and potatoes. After World War II, a plant parasite which killed many crops placed great restrictions on farmers at the same time as a homebuilding sweep hit the area. Large tracts of farmland were purchased by the government, and by 1955, new homes replaced nearly every acre of what was once farmland. The population of Hicksville grew from 8,000 in 1949 to nearly 49,000 by 1955. Starting in the 1950s, Hicksville grew into an industrial hub in Nassau County (Evers, 1978; *Newsday*, 1990).

Present-day Hicksville encompasses an area of 6.64 square miles and has a population of approximately 48,000. There are 4,900 school-aged children in Hicksville. The manufacturing industry has declined in recent years, and Hicksville's industries now include banking, securities, retail, and some manufacturing (*Long Island Almanac*, 1990).

The residents of Hicksville receive their water from the Hicksville Water District that has wells located approximately one mile northeast of the Anchor Chemical site. The Hicksville wells tap from the sole-source aquifer which serves all of Long Island.

Hicksville is governed by the Town of Oyster Bay which is managed by a town supervisor and has a six-member town council. There are twelve very active civic organizations within Hicksville. Hicksville civic groups have become involved in issues such as the reconstruction of downtown Hicksville, town beautification, and restrictions on additional development, with their current focus on environmental issues. A letter to the editor in a 1970 edition of the *Mid*

Island Herald (Evers, 1988) voices concern over the fact that Hicksville has very little open land and that it is hemmed in by a network of four-lane highways -- concerned citizens were objecting to further development. A town historian emphasizes in his account of the economic history of Hicksville that "a renewal of strong civic action is about the best force an unincorporated village such as Hicksville can utilize . . . to effect change in its eroding environment."

2. *History of Community Involvement*

Community members are just learning of the activities related to the Anchor Chemical site. Citizens and town officials are more familiar with a spill of approximately 3,700 gallons of methyl ethyl ketone (MEK) which occurred near the Anchor Chemical site at 530 West John Street in January of 1982 and sparked a high level of interest and concern. There is a general feeling among community members interviewed that there is a certain amount of misinformation regarding the site. Until recently, community members thought that the abovementioned spill incident was the "Anchor Chemical" site. Town officials stated they have received no inquiries to date from citizens regarding the Anchor Chemical site.

Residents interviewed expressed concern over several other environmental problems within Hicksville and mentioned the following sites as being of particular concern:

- Twin County Asphalt Plant (odor problem)
- General Instrument Corporation
- Mattiace Petrochemical (MEK spill)
- Hooker Chemical/Ruco Polymer
- Magnasonics Devices

As mentioned earlier, activities and controversy pertaining to these sites appear to have heightened community awareness and concern regarding environmental issues.

A complete list of Federal Superfund sites located on Long Island is provided in Attachment 1 of this Community Relations Plan. In addition, interested parties are encouraged to visit the

information repository for this site (See Appendix B) where a complete list of inactive hazardous waste disposal sites in New York State is available.

3. Key Community Concerns

Officials and residents interviewed in the Hicksville/Oyster Bay community indicated that the Anchor Chemical site is a major concern to the community. Although many of those interviewed were hearing the site history and status for the first time, there seemed to be a consensus that the potential for the contamination of their drinking water supply was reason for public concern. There is clear understanding among those individuals interviewed of the vulnerability of the sole-source aquifer that serves Long Island. In general, interviewed residents ranked this site along with other environmental problems high on their list of priorities in relation to other community concerns (e.g., the local economy). Many residents interviewed ranked Anchor third behind the Twin County Asphalt Plant and the Hooker Superfund site. One resident ranked it number one and found it more frightening than the other sites due to its potential impact on the Hicksville water supply; the resident stressed that it could potentially effect more than just those in the immediate area of the site. As the results of the remedial investigation become available, the level of concern may change depending on the findings.

A summary of the key community concerns are presented below.

- **Contamination of the Public Drinking Water Supply and Related Health Risks.** Clearly, the citizens of Hicksville and the Oyster Bay officials interviewed are particularly concerned about contamination of the public wells of the Hicksville Water District. They are also concerned about potential short- and long-term health impacts as well as the destruction of Long Island's sole-source aquifer. One resident pointed to a neighborhood cluster of breast cancer cases to which no cause has been attributed but feared that environmental sources could not be ruled out.

- **Receipt of Accurate and Timely Information.** Town officials emphasized the importance of receiving accurate and timely information from EPA regarding the Anchor site. Otherwise, according to one town official, there will be confusion and a misunderstanding regarding the nature of the problem. The community was aware of the

1982 methyl ethyl ketone spill near the Anchor site, but many thought this event was tantamount to Anchor.

Both citizens and town officials expressed a strong interest in being kept informed of all site activities throughout the entire RI/FS process. Residents realize that the RI/FS is a slow process but they want to understand it better. From past experience, it appears that EPA does not always meet its goal of maintaining good community relations based on the perceptions of several citizens. Reference was made to another Federal Superfund site in the area for which a long period of time passed without any EPA contact, and then suddenly community members were reportedly given only a two-day notice before a critical meeting.

Interviewed residents requested a detailed history of the site, the status of the underground storage tanks, and the schedule of RI/FS activities. Residents are concerned that the contractor responsible for the investigation will drag out this process. Residents want assurances from EPA that the process will move forward and that EPA will ensure the quality of contractor work.

- **Decrease in Property Values/Bad Publicity.** Citizens interviewed expressed concern about how the degradation of the water supply might negatively impact real estate in the area. Both new and long-time residents interviewed are concerned that the community will get a "bad reputation" due to the number of hazardous waste sites within Hicksville. They stated that they do not want to be known as another "Love Canal."

- **Coordination of Efforts to Disseminate Information about Hicksville Hazardous Waste Sites.** Residents expressed a strong desire for coordination among EPA, the New York State Department of Environmental Conservation (NYSDEC), and local officials in disseminating site-related information since there are several other hazardous waste sites in Hicksville, both EPA and state-lead sites. Citizens are confused about jurisdictional issues. One citizen stated that several different discussions convey a "disjointed message."

- **Remediation Related Activities.** Certain residents were concerned with the potential negative impacts of remedial activities (e.g., air emissions related to the use of an air stripper). A few residents were concerned about the fate of contaminants once they are removed from the Anchor site (e.g., contaminated soil).

- **Cost of Investigation.** Residents expressed an interest in learning the status of the responsible party(ies) associated with the site and who will ultimately pay for the investigation and remedial action.

D. DEVELOPMENT OF THE COMMUNITY RELATIONS PROGRAM

1. Objectives

Interviews and discussions with local officials and residents revealed that there is a moderate to high desire to be kept informed of site activities. The community relations program will be gauged according to the community's need for information, and its interest and willingness to participate in the remedial process. The community relations program will provide a means to keep the entire community informed of major developments at the site and aware of opportunities for involvement in the Superfund process.

The community relations program has the following objectives:

- **Provide the public with accurate information to inform them of progress at the site.** It is important that the entire community be kept informed of the progress and major milestones of the site investigations. Information will be accurate, up-to-date, and understandable in order to maximize the credibility of EPA and other agencies involved in the program.

- **Educate community members about the Superfund process and the role of EPA.** The Hicksville community wants very much to understand the investigative process and the responsibilities of the various parties involved. Efforts will be made to describe the steps involved in the Superfund process and the criteria used to determine if and how the site should be remediated.

- **Support the interpretation of technical information.** Concise and easily-understood information will be made available to all residents and officials on the schedule of technical activities, their purpose, and their outcome. Community relations staff will attempt to identify special situations or concerns where more specialized information may be required or where certain types of information are needed by single individuals or groups (e.g., the various civic groups).

  The community relations program will provide a means for interested residents, officials, and local environmental groups to interpret technical information when necessary. (See discussion of the Technical Assistance G. nt program in the next section.)

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2. Techniques and Timing

EPA Superfund guidance requires certain community relations activities during the RI/FS. These include providing a public comment period on the RI/FS and Proposed Plan and preparing a responsiveness summary. Other activities can be suggested based on the specific needs of the Hicksville community. Those community members interviewed expressed a strong interest in being kept informed of site activities through the maintenance of an information repository, mailings, news releases, and public meetings.

Community relations activities for the Anchor Chemical site and the general time frame for their implementation are described below.

- **Establish and maintain information repositories.** Fact sheets, technical summaries, site reports (including the community relations plan), Superfund information, and other site-related material will be readily available to all interested parties. An information repository will be located at the Hicksville Public Library. See Appendix B for addresses and hours of operation.

  Timing: One information repository has already been established. The information repository will be maintained for the duration of Superfund remedial activities, and information will be added to it in a timely and continuous manner.

- **Establish information contacts.** The EPA site Remedial Project Manager and the Community Relations Coordinator will serve as information contacts throughout the Superfund investigations at the Anchor Chemical site. Ready access to these individuals will help to ensure that concerns and questions of officials, community groups, and residents are addressed effectively. Appendix A lists the names and telephone numbers of the two EPA information contacts.

  Timing: Two contacts have already been designated. Their names and telephone numbers will be included in all mailings and news releases.

- **Maintain a site mailing list.** All interested officials, residents, community groups, responsible parties, and news media representatives will be included on a site mailing list. This list will be used to distribute fact sheets and other site-related information. The mailing list will be updated primarily on the basis of meeting sign-in sheets and communications with the information contacts mentioned above. A mailing list sign-up sheet will be maintained at the information repository.

Timing: EPA has established a mailing list for the Anchor Chemical site. This mailing list should be continually updated.

- **Issue press releases and public notices.** Press releases will be issued to provide timely notification of project milestones and upcoming activities. The language in the press releases will be clear and concise to minimize the risk of misinterpretation. The appropriate media contacts for this purpose are listed in Appendix A.

  Timing: Press releases will be issued at project milestones and for the announcement of significant findings or to announce meetings.

- **Prepare and distribute fact sheets.** Fact sheets will be issued to provide information about the Superfund program and activities at the Anchor Chemical site. Community members indicated that they would like a fact sheet summarizing the site history and outlining the schedule of RI activities. Other fact sheets that will likely be written and distributed include one which will summarize the results of the remedial investigation and one that will present the results of the feasibility study and the proposed remedial action plan.

  Timing: Fact sheets will be distributed periodically. They will be issued at milestones such as the completion of the remedial investigations.

- **Hold public meetings.** Hicksville residents clearly indicated that they would like to hold public meetings to discuss site activities. The various civic organizations meet regularly with relatively good attendance. Such gatherings will therefore be valuable in providing an open exchange of information and ideas. Any changes in public concerns and/or information needs may be monitored during these meetings. Audio-visual aids and face-to-face discussions facilitate the understanding of more complex technical issues. Suggested meeting locations are listed in Appendix B.

  Timing: A general informational meeting early in the remedial investigation is recommended to provide community members with information addressing site history, planned site activities, and the Superfund process in general. A second meeting will likely be held to present the results of the RI and plans for future activities. A third meeting will be held to present the results of the FS and the Proposed Plan.

- **Allow a public comment period on the RI/FS and Proposed Plan.** EPA must provide a minimum of 30 days for public comment on the RI/FS and Proposed Plan. Oral and written comments provided during this period will be considered in the process of selecting cleanup alternatives.

  Timing: The public comment period will follow preparation of the RI/FS and Proposed Plan during which time a public meeting will be held.

- **Prepare a Responsiveness Summary.** EPA must prepare a Responsiveness Summary which summarizes all comments and concerns submitted during the comment period on the RI/FS and the Proposed Plan, and EPA's responses to these comments. The Responsiveness Summary must accompany the Record of Decision for the site.

  Timing: The Responsiveness Summary must be prepared following the public comment period on the RI/FS and Proposed Plan.

- **Revise the community relations plan.** This community relations plan will be revised, if necessary, following the RI/FS phase of site investigations. It may be necessary to conduct additional personal interviews to evaluate changes in community perceptions and concerns.

  Timing: EPA will revise the community relations plan as necessary during the remedial design/remedial action phase of site activities.

E. REFERENCES

Roux Associates, *Anchor Chemical Remedial Investigation/Feasibility Study Work Plan*, June 1990.

Evers, Richard E., *The Story of Hicksville, Yesterday and Today*, 1978.

Evers, Richard and Anne, *Hicksville Traumas a Dilemma: The Elevation of the Railroad, Destruction of West Broadway and the G-1 Zoning Ordeal, 1981-1986, Vol. II, The Economic History of Hicksville*, 1988.

Long Island News, *Long Island Almanac*, 1990.

"Historical Hicksville," *Newsday*, Special Section, June 10, 1990.

U.S. Environmental Protection Agency, *Community Relations in Superfund: A Handbook, Interim Version*, June 1988, EPA/540/G-88/002.

APPENDIX A

OFFICIALS, KEY CONTACTS, AND INTERESTED PARTIES

A. Federal Elected Officials

1. Senator Alfonse D'Amato

New York Office:
Leo O'Brien Federal Building (518) 472-4343
Room 420
Albany, NY 12207

Washington DC Office:
Senate Hart Building (202) 224-6542
Room 520
Washington, DC 20510

2. Senator Daniel Moynihan

New York Office:
405 Lexington Avenue (212) 661-5150
New York City, NY 10174

Washington DC Office:
Senate Russell Building (202) 224-4451
Room 520
Washington, DC 20510

3. Representative Norman F. Lent

New York Office:
2280 Grand Avenue (516) 223-1616
Baldwin, NY 11510

Washington DC Office:
2408 Rayburn House Office Building (202) 225-7896
Washington, DC 20515

B. U.S. Environmental Protection Agency

1. Dorothy Allen — (212) 264-6321
   Remedial Project Manager
   U.S. Environmental Protection Agency
   26 Federal Plaza; Room 734
   New York, NY 10278

2. Cecilia Echols — (212) 264-0949
   Community Relations Coordinator
   U.S. Environmental Protection Agency
   Office of External Programs
   26 Federal Plaza; Room 905
   New York, NY 10278

C. State Elected Officials

1. Governor Mario Cuomo — (518) 474-8390
   Executive Chamber
   State Capital
   Albany, NY 12224

2. Senator Ralph Marino — (518) 455-2800
   68 West Main Street
   Oyster Bay, NY 11771

3. Assemblyman Lewis J. Yevoli — (516) 822-3301
   13th District
   146 A Manetto Mill Road
   Plainview, NY 11803

4. Assemblyman Frederick E. Parola, Jr. — (516) 731-3434
   14th District
   3700 Hempstead Turnpike
   Levittown, NY 11756

5. Assemblyman Daniel Frisa — (516) 334-3456
   15th District
   1000 Gloucester Court
   Westbury, NY 11590

D. State Agencies

1. Thomas Jorling — (518) 457-3446
Commissioner
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, NY 12233

2. Edward Sullivan — (518) 457-1415
Deputy Commissioner
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, NY 12233

3. Michael O'Toole — (518) 457-5861
Director; Division of Hazardous
Waste Remediation
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, NY 12233

4. Joshua Epstein — (516) 751-7900
Citizen Participation Specialist
Division of Hazardous Waste Remediation
New York State Department of
Environmental Conservation, Region 1
SUNY Building 40
Stoney Brook, NY 11790

5. Dr. William Stasiuk — (518) 458-6400
Director; Center for Environmental Health
New York State Department of Health
2 University Place
Albany, NY 12203

6. Dr. John Hawley (518) 458-6376
Bureau of Toxic Substance Assessment
New York State Department of Health
2 University Place
Room 240
Albany, NY 12203

7. Ronald Tramontano (518) 458-6310
Director; Bureau of Environmental
Exposure Investigation
New York State Department of Health
2 University Place
Albany, NY 12203

E. Local Officials (Town and County)

1. Mr. Angelo A. Delligatti (516) 922-5800
Town of Oyster Bay Supervisor
Town of Oyster Bay
Audrey Avenue
Oyster Bay, NY 11771

2. Doris Kirby (516) 922-5800
Public Information Officer
Town of Oyster Bay
Town Hall East
54 Audrey Avenue
Oyster Bay, NY 11771

3. Anthony J. Morino (516) 921-7347
Commissioner
Dept. of Environmental Control
Town of Oyster Bay
150 Miller Place
Syosset, NY 11799

4. Carl L. Marcellino (516) 922-5800
Town Clerk
Town of Oyster Bay
Audrey Avenue
Oyster Bay, NY 11771

5.	Councilman Douglas J. Hynes Town of Oyster Bay Audrey Avenue Oyster Bay, NY 11771	(516) 922-5800
6.	Councilman Leonard B. Symons Town of Oyster Bay Audrey Avenue Oyster Bay, NY 11771	(516) 922-5800
7.	Councilman Thomas Clark Town of Oyster Bay Audrey Avenue Oyster Bay, NY 11771	(516) 922-5800
8.	Councilman John Venditto Town of Oyster Bay Audrey Avenue Oyster Bay, NY 11771	(516) 922-5800
9.	Councilman Howard H. Hogan Jr. Town of Oyster Bay Audrey Avenue Oyster Bay, NY 11771	(516) 922-5800
10.	Councilwoman Ann R. Ocker Town of Oyster Bay Audrey Avenue Oyster Bay, NY 11771	(516) 922-5800
11.	Gary F. Musiello Receiver of Taxes Town of Oyster Bay 74 Audrey Avenue Oyster Bay, NY 11771	(516) 922-5800
12.	Karl J. Leupold Commissioner of Public Works 150 Miller Road Syosset, NY 11771	(516) 921-7347

13.	Richard S. Blankfein Commissioner of Planning & Development 74 Audrey Avenue Oyster Bay, NY 11771	(516) 922-5800
14.	Richard Woodwell, Superintendent Hicksville Water District 4 Dean Street Hicksville, NY 11801	(516) 931-0184
15.	Chief Tony Wigdzinski Hicksville Fire Department 20 East Murray Street Hicksville, NY 11801	(516) 933-6444
16.	Peter Witkowski Nassau County Dept. of Public Works Hazardous Waste Services Unit 425 Salisbury Park Drive Westbury, NY 11590	(516) 535-3139
17.	Hicksville Chamber of Commerce 252 Old Country Road Hicksville, NY 11801	(516) 931-7170
18.	John R. Specht Nassau County Fire Marshall 899 Jeruselum Street P.O. Box 128 Uniondale, NY 11553	(516) 566-5800
19.	Inspector Frank Matzen Second Police Precinct 7700 Jericho Turnpike Woodbury, NY 11797	(516) 573-6200
20.	Dr. John B. Branche Commissioner Nassau County Department of Health 240 Old Country Road Mineola, NY 11501	(516) 535-3410

F. Environmental Groups

1. Sierra Club (518) 472-1534
   Atlantic Chapter Office
   P.O. Box 2112
   Empire State Plaza
   Albany, NY 12220

2. Mr. Hauser (516) 921-5882
   Sierra Club
   46 Sherman Drive
   Syosset, NY 11791

G. Citizens Groups

1. Ester Ernst (516) 681-1044
   League of Women Voters, Syosset Area
   26 Butler Street
   Westbury, NY 11590

2. Maryann Ferrado, President (516) 433-8445
   Northwest Civic Association
   95 Kulh Avenue
   Hicksville, NY 11801

3. David Staton, President (516) 939-0256
   Duffy Park Civic Association
   P.O. Box 8120
   Hicksville, NY 11801

4. Joseph DePompa, President (516) 433-4373
   Hicksville Community Council
   70 East End Avenue
   Hicksville, NY 11801

5. Thomas McGovern, President (516) 938-7309
   Geise Park Civic Association
   10 Brook Street
   Hicksville, NY 11801

6.	Rosella Maggio, President Hicksville Garden Civic Association 60 Field Avenue Hicksville, NY 11801	(516) 433-9161
7.	Richard Pfaender, President Midland Civic Association 20 Waters Avenue Hicksville, NY 11801	(516) 931-4398
8.	Eleanor Draycott, President Hicksville Coalition of Civics 12 Jolan Avenue Hicksville, NY 11801	(516) 935-5793
9.	Glenn Sutker, President Northeast Civic Association 60 East End Avenue Hicksville, NY 11801	(516) 822-9142
10.	John Fahrenbach, President South Hicksville Civic Association 17 Cloister Lane Hicksville, NY 11801	(516) 796-2689
11.	Ron Beauman Hillside Terrace Association 45 Cornell Lane Hicksville, NY 11801	(516) 938-4995
12.	Joyce Wagner, President Twinlawns Civic Association 44 Twinlawns Avenue Hicksville, NY 11801	(516) 681-8674
13.	Margaret Kelly, President West Village Green Civic Association 93 Lantern Road Hicksville, NY 11801	(516) 735-6451

H. Local Media

Newspapers

1. Rita Longdon-Edita — (516) 747-8282
   Hicksville Illustrated News
   32 East Second Street
   Mineola, NY 11501

2. *Mid-Island Times* — (516) 931-0012
   Litmor Publications
   81 East Barclay Street
   Hicksville, NY 11801

3. *Newsday* — (516) 454-2020
   235 Pinelawn Road
   Melville, NY 11747

4. *New York Times* — (516) 746-2146
   Long Island Bureau
   1325 Franklin Avenue
   Garden City, NY 11530

Television Stations

1. Ken Rosenblum — (516) 454-8866
   Channel 21
   P.O. Box 21
   Plainview, NY 11803

2. Cablevision — (516) 496-1746
   Channel 12
   1 Media Crossways
   Woodbury, NY 11797

Radio Stations

1.	WALK Colonial Drive East Patchogue, NY 11772	(516) 475-5200
2.	WHLI (AM)/WKJY (FM) 384 Clinton Street Hemstead, NY 11550	(516) 481-8000
3.	WBAB 555 Sunrise Highway West Babylon, NY 11704	(516) 587-1023
4.	WGSM 900 Walt Whitman Road Melville, NY 11747	(516) 423-6740

APPENDIX B

INFORMATION REPOSITORIES AND SUGGESTED MEETING LOCATIONS

A. Information Repository

1. Hicksville Library (516) 931-1417
   169 Jerusalem Avenue
   Hicksville, NY 11801

   Hours: Mon. - Fri. 10:00am to 9:00pm
   Sat. 10:00am to 5:00pm
   Sun. 1:00pm to 5:00pm

B. Suggested Meeting Locations

1. Hicksville Library (516) 931-1417
   Community Room
   169 Jerusalem Avenue
   Hicksville, NY 11801

   Capacity: 200

2. Hicksville Senior High School (516) 933-6621
   Division Avenue
   Hicksville, NY 11801

   Capacity: 300+ (auditorium)
   Cost: $50.00/meeting

3. Hicksville Middle School (516) 933-6524
   Jerusalem Avenue
   Hicksville, NY 11801

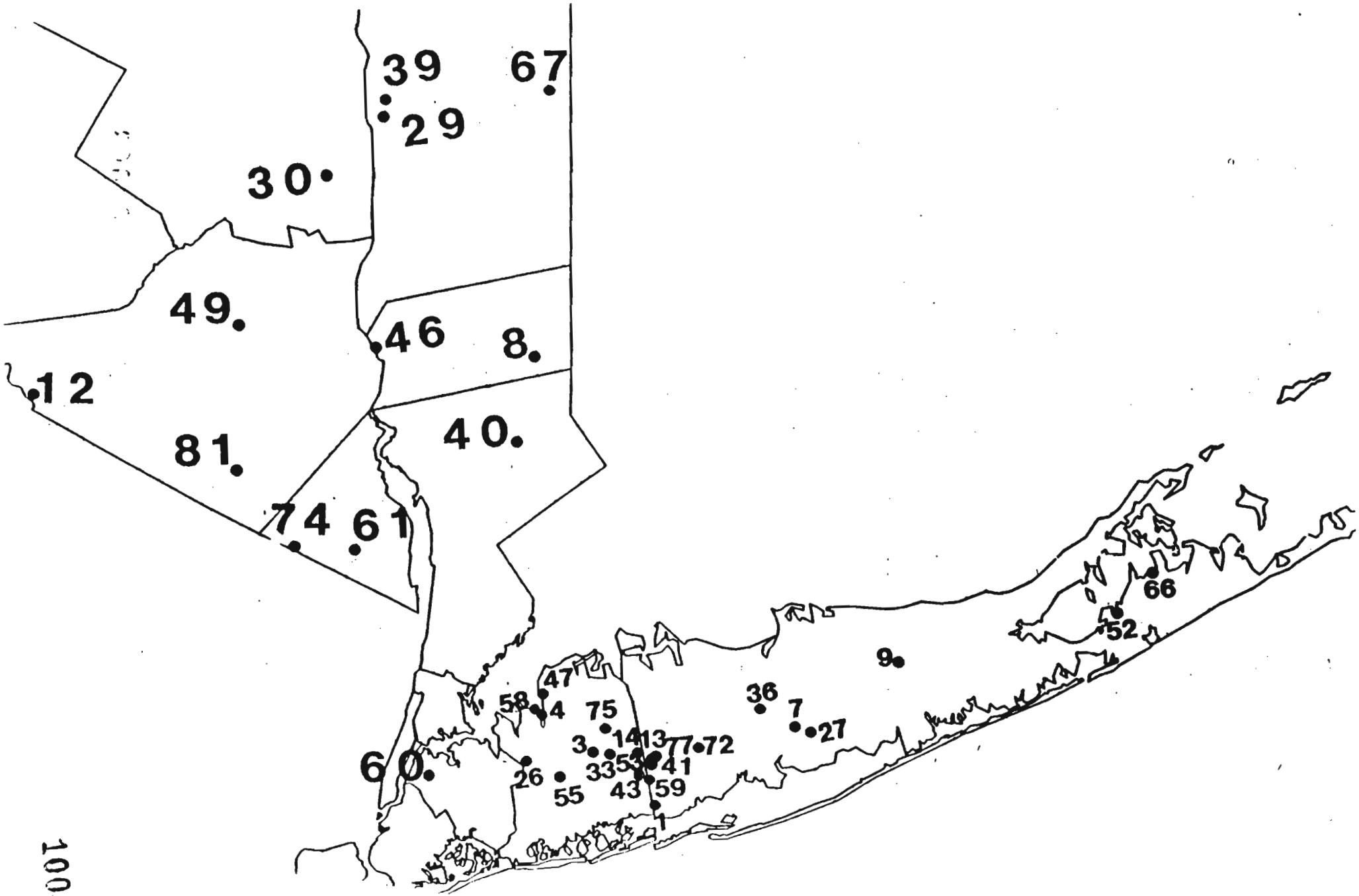
4. Oyster Bay Town Hall (516) 922-5800
   Audrey Avenue
   Oyster Bay, NY

APPENDIX C

FEDERAL SUPERFUND SITES ON LONG ISLAND

60	Radium Chemical, Woodside, Queens
58	Port Washington Landfill, Port Washington, Nassau
47	Mattiace Petrochemicals Company, Glenwood Landing, Nassau
4	Applied Environmental Services, Glenwood Landing, Nassau
75	Syosset Landfill, Oyster Bay, Nassau
3	Anchor Chemicals, Hicksville, Nassau
26	Genzale Plating Company, Franklin Square, Nassau
55	Pasley Solvents and Chemical Inc., Garden City, Nassau
33	Hooker Chemical/Ruco Polymer, Hicksville, Nassau
14	Claremont Polychemical, Old Bethpage, Nassau
53	Old Bethpage Landfill, Oyster Bay, Nassau
43	Liberty Ind. Finishing, Farmingdale, Nassau
13	Circuitron Corporation, Farmingdale, Suffolk
77	Tronic Plating Company, Farmingdale, Suffolk
41	Kenmark Textile Corp., Farmingdale, Suffolk
59	Preferred Plating Corp., Farmingdale, Suffolk
1	Action Anodizing and Plating, Copiaque, Suffolk
72	SMS Instruments Inc., Deer Park, Suffolk
36	Islip SLF, Hauppauge, Suffolk
7	Biochemical Laboratories Inc., Bohemia, Suffolk
27	Goldisk Recordings Inc., Holbrook, Suffolk
9	Brookhaven National Laboratory, Upton, Suffolk
52	North Sea Municipal Landfill, North Sea, Suffolk
66	Rowe Industries, Sag Harbor, Suffolk

Attached map shows approximate site location.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ALLIANCE
Technologies Corporation

A TRC Company

1000033

Superfund Program
Fact Sheet

EPA
Region II

Anchor Chemical Site
Hicksville, New York

August 1991

EPA Begins Remedial Investigation at the Anchor Chemical Superfund Site

The U.S. Environmental Protection Agency (EPA) is initiating a **Remedial Investigation/Feasibility Study (RI/FS)*** at the Anchor Chemical **Superfund** site in Hicksville, New York. The objectives of the study are to determine the nature and extent of soil and **ground water** contamination originating from past industrial activities at the site, to evaluate various cleanup alternatives, and to collect sufficient data and information in order to select the most appropriate alternative. The RI site field activities began in June 1991.

This fact sheet provides a brief description and history of the Anchor Chemical site, a synopsis of the EPA Superfund process, and a summary of the RI activities to be conducted over the next several months. This fact sheet also announces a public informational meeting which will be held to discuss the progress of the RI and identifies other ways the public may become involved in site investigations.

Site Overview

The Anchor Chemical Superfund site is located at 500 West John Street in the village of Hicksville, Nassau County, New York. K.B. Company has owned this property since 1964. The site, which consists of a two-story building on a 1.5-acre lot, was leased to Anchor Chemical from 1964 to 1978, and Anchor/Lith Kem-Ko from 1978 to 1985. Both companies manufactured and blended chemicals for the graphic arts industry. Seventeen underground storage tanks, which range from 550 gallons to 4,000 gallons in capacity, are located two feet below the concrete floor in the northeast corner of the building (see Figure 1). These tanks stored solvents and chemicals utilized in both Anchor Chemical's and Anchor/Lith Kem-Ko's manufacturing process. The site is currently leased to J&D Brauner Company for use as a furniture warehouse.

The area surrounding the site is predominantly commercial and recreational. The site is bordered to the west by commercial property, to the south by West John Street, and to the northeast by Cantiague Park (see Figure 1). Approximately 90,000 people obtain drinking water from public supply wells located within three miles of the site. There are no known private residential wells in the vicinity of the site. Additionally, a ground water **recharge** basin is located in close proximity to the site.

ANCHOR CHEMICAL SUPERFUND SITE

Public Informational Meeting

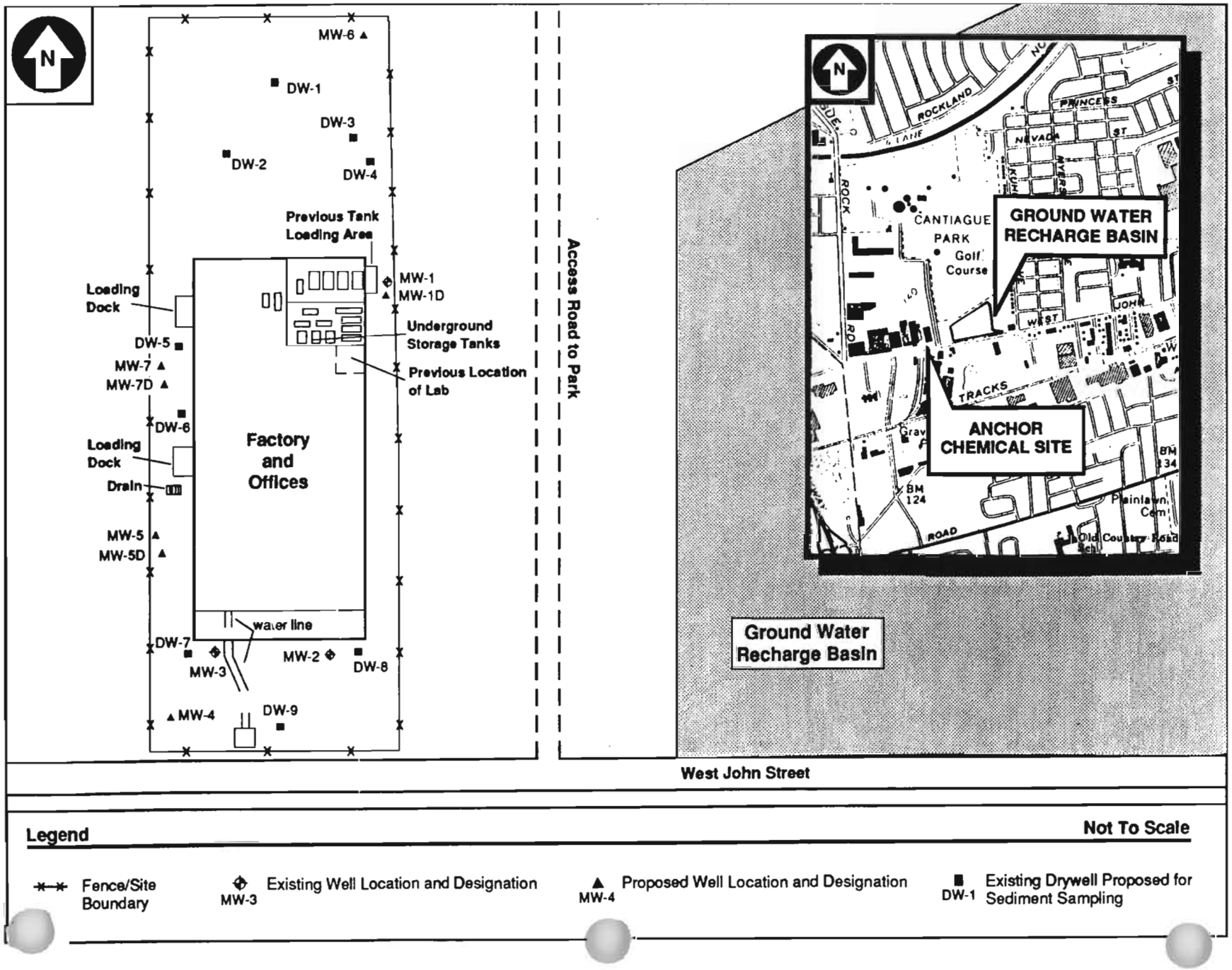
Monday, August 19, 1991
7:00 p.m.

Hicksville Library
169 Jerusalem Avenue
Hicksville, NY 11801
(516) 931-1417

EPA will hold a public informational meeting to present the upcoming site investigation. EPA and NYSDEC representatives will be present at the meeting to answer questions regarding the RI/FS and related field activities.

*Note: Words that are in **bold** print are defined in the glossary on pages 6 and 7.

Figure 1.
Anchor Chemical Study Area



In 1977, the Nassau County Department of Health (NCDH) discovered that the floor drains located inside the building were connected to a storm water **drywell** in the parking lot. Subsequent collection and analysis of sediment samples from the drywell revealed high levels of **volatile organic compounds (VOCs)** including: **1,1,1-trichloroethane, trichloroethylene,** and **tetrachloroethylene.** Subsequently, all lines leading from the building to the drywell were sealed.

In 1981, **pressure tests** conducted in compliance with a Nassau County Fire Prevention Ordinance, revealed leaks in five of the underground storage tanks. Consequently, these tanks were emptied and filled with concrete.

In 1982, at the request of the NCDH, a monitoring program was implemented at the site to determine the extent of soil and ground water contamination due to discharges from the leaking tanks. Three ground water **monitoring wells** were installed, and ground water and soil samples were collected and analyzed. Soil samples were found to contain elevated levels of **methylene chloride**, and 1,1,1-trichloroethane; ground water samples were found to contain elevated levels of 1,1,1-trichloroethane, tetrachloroethylene, **1,1-dichloroethane**, methylene chloride, and trichloroethylene.

Additional tank pressure testing in 1983 indicated leaks in a tank containing methylene chloride. However, no records were found regarding the closure of this tank.

In 1983, the site was placed on the New York State Department of Environmental Conservation (NYSDEC) list of inactive hazardous waste sites. In June of 1986 the site was placed on EPA's **National Priorities List (NPL).** Placement on the NPL makes the site eligible for federal action under the Comprehensive Environmental Response, Compensation, and Liability Act (also known as Superfund) and the Superfund Amendments and Reauthorization Act (SARA). An explanation of the Superfund process is provided on page 5 of this fact sheet.

In 1989, EPA signed an **Administrative Order on Consent** with one of the **potentially responsible parties (PRPs)**: K.B. Company (the owner of the site). EPA also issued a **Unilateral Order** to Chessco Industries, Inc. (the owner of Anchor/Lith Kem-Ko) another PRP. The agreements require the two parties to conduct or otherwise participate in the investigations of the site and to reimburse EPA for the cost of overseeing these activities.

Since the issuance of the orders, the PRPs have collected historical information about the site and drafted a **Work Plan** and **Project Operations Plan** for the site. EPA approved these documents in April 1991. EPA also completed the preparation of a **Community Relations Plan** in June 1991.

Upcoming Site Investigations

The Remedial Investigation (RI) tasks have been designed to provide sufficient data to determine the nature and extent of soil and ground water contamination at the Anchor Chemical site. The RI field activities began in June 1991 and will continue for approximately twenty-two weeks. At the completion of field activities, an RI report will be prepared summarizing the sampling results, findings, and conclusions of the field investigations. A public meeting will be held by EPA to discuss the findings of the RI.

The Feasibility Study (FS) will be conducted following the RI. This study will identify and evaluate cleanup alternatives for addressing the contamination at the site. After the FS is completed, a **Proposed Plan** outlining EPA's preferred cleanup alternative will be issued to the public for review and comment. EPA will also hold a public meeting and provide a 30-day comment period on the Proposed Plan and other documents.

Upcoming Field Activities

The following field activities are anticipated to be conducted during the RI at the Anchor Chemical site:

- *Inspection and Decommissioning of Underground Storage Tanks:* The status of twelve of the seventeen underground storage tanks is unknown. Therefore, these tanks will be inspected to determine their content and condition. The content of each tank will be sampled and analyzed. Subsequently, each tank will be emptied, cleaned, and filled with concrete.

- *Installation of Monitoring Wells:* A total of seven monitoring wells will be installed at the site. Both shallow (approximately 70 feet below the land surface) and deep (approximately 140 feet below the land surface) wells will be installed to

determine the horizontal and vertical ground water flow direction and the extent of ground water contamination.

- *Characterization of Ground Water and Sediment:* To initially characterize ground water quality at the site, the seven newly installed monitoring wells and the three existing monitoring wells will be sampled and analyzed for hazardous substances. In addition, sediment samples from nine existing drywells located throughout the site will be collected and analyzed.

- *Drilling of Soil Borings and Sampling of Soil and Ground Water:* To further characterize site contamination, subsurface soil and additional ground water samples will be collected and analyzed for hazardous substances. To enable the collection of subsurface soil samples, approximately nine **soil borings** will be drilled at potential contaminant source areas at the site. Six soil borings will be drilled near the underground storage tanks, and the remaining borings will be drilled in three of the existing drywells.

- *Survey of Water Supply Wells:* The Hicksville and Westbury Water Districts, the NYSDEC, and the NCDH will be contacted for information regarding the locations of public and private water supply wells within a two mile radius of the site. Information regarding well status, location, and other pertinent information will also be collected.

All samples collected during the RI will be analyzed for a range of contaminants including: VOCs, **semi-volatile organic compounds (SVOCs)**, pesticides, **polychlorinated biphenyls (PCBs)** and metals. EPA will use the analytical results to conduct a **risk assessment.** The risk assessment will determine the actual or potential threat to human health and the environment posed by the site.

For More Information

All EPA reports on the Anchor Chemical site, including the Community Relations Plan, and the Work Plan and Project Operations Plan for the RI, are available for public review at the information repositories established at the following locations.

Hicksville Library
169 Jerusalem Avenue
Hicksville, NY 11801
(516) 931-1417
Contact: Mrs. Watman
Hours: Mon.- Fri.: 10:00 a.m. to 9:00 p.m.
Sat.: 10:00 a.m. to 5:00 p.m.
Sun.: 1:00 p.m. to 5:00 p.m.

U.S. Environmental Protection Agency
Emergency and Remedial Response Division
26 Federal Plaza
New York, NY 10278
Contact: Dorothy Allen
Hours: Mon. - Fri.: 9:00 a.m to 5:00 p.m.

If you have any questions about the site or would like more information, please call or write:

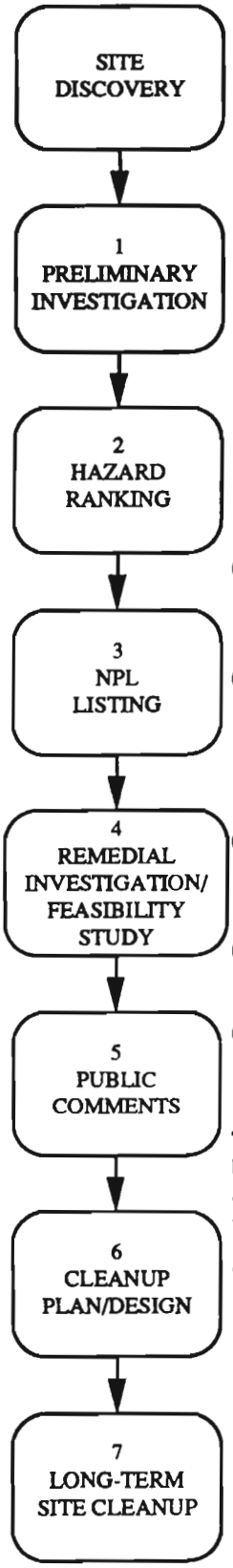
Dorothy Allen
Remedial Project Manager
U.S. Environmental Protection Agency
26 Federal Plaza, Room 747
New York, NY 10278
(212) 264-6321

Cecilia Echols
Community Relations Coordinator
U.S. Environmental Protection Agency
Office of External Programs
26 Federal Plaza, Room 905
New York, NY 10278
(212) 264-0949

As part of the Superfund program, EPA is providing communities with an opportunity to apply for Technical Assistance Grant. These grants of up to $50,000 per site are designed to enable community groups to hire a technical advisor or consultant to assist them in interpreting and commenting on the site findings and the planned cleanup. Citizens who are interested in the Technical Assistance Grants program may obtain an application package by calling or writing:

Marilyn Fast
Technical Assistance Grants Coordinator
U.S. EPA, Region II
26 Federal Plaza, Room 1714
New York, New York 10278
(212) 264-9860

The Superfund Process



In 1980, Congress passed a law called the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLA created a tax on the chemical and petroleum industries. The money collected from this tax, known as the Superfund, goes toward the cleanup of abandoned or uncontrolled hazardous wastes sites. The discovery of a potential hazardous waste site can occur in the course of required reporting or routine inspections or when there is physical evidence of contamination (drums, odors). The Superfund process then begins. The basic steps of the Superfund process are discussed below.

(1) Preliminary investigations, usually conducted by state environmental agencies, provide preliminary information regarding the history of disposal and present conditions at the site.

(2) If EPA decides that there is a potential for contamination at the site, a Hazard Ranking Study is conducted (this often uses information from the preliminary investigations). A site is ranked using a scoring system that evaluates many factors, among them:

- Possible harm to human populations or the environment from hazardous substances leaving the site through ground water, surface water, surface soil, or air;
- Possible harm to individuals coming in contact with hazardous substances at the site itself (from inhalation, direct contact, fire, explosion, and accidental ingestion of substances at the site); and
- Potential for substances at the site to contaminate drinking water wells and the number of people potentially affected by well contamination;

(3) If a site is considered to present a potentially serious hazard, the site is placed on the National Priorities List (NPL). Sites on the NPL present the most serious problems among hazardous waste sites nationwide and are eligible for Superfund money.

(4) Once a site is placed on the NPL, a Remedial Investigation (RI) is conducted. An RI assesses the nature and extent of contamination on site and determines the potential risks to the community and the environment. In addition to the RI, a Feasibility Study (FS) is conducted. The FS examines the pros and cons of various cleanup options (e.g. removal of contaminated soil, installation of water purification systems, or containment of contaminants).

(5) Before choosing one or a combination of cleanup methods, EPA addresses public comments. The purpose of this is to determine which of the proposed cleanup alternatives would most effectively meet the desires of the local community.

(6) The optimal cleanup alternative is documented in the Record of Decision, after which a cleanup plan is designed.

(7) Cleanup is the last step of the process. The method of cleanup may vary according to the type and amount of contamination present at a site, the possible receptors of contamination near the site, and the concerns of the community.

The time it takes to complete the Superfund process varies with each site. In general, the RI/FS stage can take between one and two years. The design of the chosen cleanup alternative takes approximately six months. The actual cleanup may take another one to three years but may be significantly prolonged if ground water has been affected.

Throughout the Superfund Process, several activities are continuously being conducted, including:

- ***Site Monitoring.*** If a site is thought to be an immediate threat to public health or the environment, continuous monitoring of onsite conditions occurs. Under severe conditions, EPA may conduct an emergency cleanup (called immediate removal or initial remedial measures).
- ***Community Relations.*** EPA actively informs the community and community officials of the status of the remediation process. In addition, EPA encourages public input throughout the process. Specific activities may vary from site to site depending on the level and nature of public concern. Activities often include public meetings, press releases, and community interviews.
- ***Enforcement.*** After a site is included on the NPL, EPA determines who is responsible for the contamination at the site. The potentially responsible parties (PRPs) are legally obligated to either conduct or pay for the cleanup of the site and to reimburse EPA and state agencies for oversight costs and costs incurred during any previous remediation.

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Mailing List Additions

If you or someone you know would like to be placed on the Anchor Chemical Site mailing list, please fill out and mail this form to:

Cecilia Echols
Community Relations Coordinator
U.S. Environmental Protection Agency, Region II
Office of External Programs
26 Federal Plaza, Room 905
New York, New York 10278
(212) 264-0949

Name: _____

Address: _____

Affiliation: _____ Phone: _____

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Inside: Anchor Chemical Superfund Site Fact Sheet

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