

April 3/8.

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA,
THE STATE OF NEW YORK,

Plaintiffs,

v.

HOOKEER CHEMICALS & PLASTICS CORP.;
OXY CHEMICAL CORPORATION; HOOKEER
CHEMICAL CORPORATION; OCCIDENTAL
PETROLEUM CORPORATION; THE TOWN OF
LEWISTON; THE TOWN OF NIAGARA,
(Hyde Park Landfill),

Defendants.

Civil Action No. 79-989

RESPONSE TO PUBLIC COMMENTS ON THE
STIPULATION AND JUDGMENT APPROVING
SETTLEMENT AGREEMENT

I. Introduction

The Department of Justice regulation, 28 C.F.R. Section 50.7, requires that any proposed consent decree or judgment involving the discharge of pollutants must be made available for public comment for a period of 30 days before being entered and made final by a Court. On February 5, 1981, the required Federal Register public notice of availability was published for the "Stipulation and Judgment Approving Settlement Agreement" (lodged on January 19, 1981) (hereinafter "Settlement Agreement") which intended to settle United States and the State of New York v. Hooker Chemicals & Plastics Corp., et al. (Hyde Park), Civ. Act. No. 79-989 (filed Dec. 20, 1979), 46 Fed. Reg. 11074 (Feb. 5, 1981).

The comment period ended on March 9, 1981. By order of this court further comments were received by this Court until March 20, 1981. Because of the extraordinary public interest in this case, the Department of Justice held a public hearing on Thursday, February 19, 1981 at 7:00 p.m. to obtain additional comments and the transcript of that hearing was submitted to the Court.

The Department of Justice has informed the Court that it will respond to all the comments received through the 28 C.F.R. Section 50.7 process and to make available to the Court both the comments and responses. This document contains the joint responses of the Federal and State governments to all the comments in this case. */ All the comments (those received by the Court, at the United States Attorney's office, at the Department of Justice in Washington and at the February 19, 1981 public hearing) were read and categorized according to subject in order to avoid duplicative answers. In this response, the general comment or question is listed followed by a list of all the comments which made this same point. Underneath each comment is the formal response.

In general the response addresses those comments which go to the substance of the Settlement Agreement. Many of the comments were general reactions to the Settlement Agreement (e.g., I like it or dislike it) or statements of fact (e.g., citing the complaint). In general such comments by their nature are not amenable to specific responses. Certain misunderstandings or misstatements of fact, however, are responded to, in order to clarify the situation.

Through this submission the undersigned have sought to be fully responsive to the questions contained in the public's comments. The purpose of these responses is twofold: (1) to answer the public's questions and concerns and (2) to assist the Court in its review of the Settlement Agreement. However, it should be noted that the foregoing responses merely summarize certain portions of the Settlement Agreement and are not intended to alter or modify any terms or conditions of that Agreement.

II. General

This Settlement Agreement has received a substantially greater volume of comment than most Federal environmental consent decrees. There were approximately 244 pages of comments submitted, including pages of transcript from the February 19, 1981 public hearing, from approximately 22 separate commentators (not counting members of the same organization separately). One hundred and thirty-three separate responses were made. Approximately 63% of the pages of comments

*/ Although 28 C.F.R. Section 50.7 is a Federal regulation, the Settlement Agreement was jointly negotiated and specifies joint obligations of the governmental parties. The responses of the Federal and State governments cannot be separated.

came from four organized groups or related sources and 71% of the comments came from six such groups or sources. We believe that most of the comments are based on a misreading of the Settlement Agreement or call for relief which it is either technically or legally impossible to obtain. (We believe that the responses provided below answer all the questions of the commentators and strongly support our view that this Settlement Agreement is in the public interest and should be approved by this Court.)

At the February 19, 1981 public hearing one of the State negotiators aptly summarized the overall Federal and State view of the Settlement Agreement:

... the health and the safety and the welfare of the people in this community is our chief concern, -is the concern of the State of New York, it is the concern of the Federal Government. That is why we are here tonight, that is why this document exists. That is why there were lawsuits filed, that is why we believe that the settlement is a good settlement. The threat is to human beings, as everyone here is pointing out. The threat of the landfill that now exists, the threat of those chemicals that are in that landfill is to human beings. We are -- we're not concerned to clean up a bunch of rocks. We're not concerned to scour a gorge because we're cleanliness nuts. [Those chemicals are toxic and those chemicals are endangering people. And we think that cleaning up those chemicals is a great step forward to addressing the human concerns that you people honestly have and that we share. We think this decree deals with the threat that's posed by the landfill site.] The decree is far-reaching.

It deals with the surface, as far as it goes. It deals [with chemicals which have migrated] into the ground, as far down and out as it goes. It deals with the Bloody Run, it deals with the Niagara Gorge. It, moreover, sets a performance standard for Hooker to follow.

Hooker is obligated to come up with the technology that will fulfill the purposes of the decree. And those purposes are exactly human purposes, human concerns, to deal with and address the health and safety of the residents of this area by cleaning up and containing chemical contamination using requisite remedial technology. Obviously, this is not a perfect decree. There are legal and there are

technologic limits to what we can do as Governmental entities and what we can do in the context of a lawsuit and settling that lawsuit.

In addition to the legal complications involving the third party claims that people are honestly concerned about, their own personal injuries, their own personal property damage, these are concerns we cannot directly address in this Judgment, but we feel that the Judgment does not affect those issues.  You have your lawsuits. And in addition the Judgment collects the evidence that you need to prove your cases. The evidence that Hooker is going to collect, that the State and Federal Government is going to monitor. ...

[The State and Federal attorneys] are advocates for the people of the State of New York. [They] are advocates for the public interest. We think this settlement serves the public interest, even though it is imperfect.... [T]he virtues of settling versus years and years of litigation. Years and years in which nothing will be done at this site and which the problem will continue to fester without action, at the end of which, if we win, the Court may turn around and order us to sit down and come up with a plan very similar to what we are outlining here to you tonight. We think that that time would be better spent in dealing with the problem now, and we think that that's what this decree does. It will take time to be put into effect. It will take time to work out the wrinkles. It is only a beginning. Fifty years from now, when hundreds of other dump sites, we hope, in the country will be dealt with, we may all look back on this and say, you know, what an old fashioned technique, what were we doing there? But this is the first step. It has to be taken for us to reach that [point] hundred years from now.

Mary Ellen Burns, Assistant Attorney General, the State of New York Transcript of February 19, 1981 public hearing (hereinafter referred to as February 19, 1981 public hearing) at 184-9.

III. Comments and Responses

A. Comments Generally Concerning Relocation

1. Comment: The most frequently received comment was that all the residents of the Bloody Run Creek area should be permanently

relocated before commencement of the clean up program. Affidavit of Stanley Grossman, representing several residents (February 9, 1981) at paragraph 20; Letter from Councilpersons Joan Gipp and William Heinz at 1 (February 9, 1981); Letter from Fred Armagost at 2 (January 28, 1981); Letter from Councilman William Heinz at 3 (February 18, 1981); Comment of Councilwoman Joan Gipp at 90, 92, 96 (at public hearing February 19, 1981 and in writing); Letter from Councilman Alvin Ogg at 7, 10 (February 21, 1981); Letter from Mr. and Mrs. Mazaika (received March 6, 1981); Comments of Citizens Alliance at 3-4 and at 111 (February 19, 1981 public hearing); Comment of Richard Berger at 127 (February 19, 1981); Comment of Danielle De Golick at 129 (February 19, 1981 public hearing), Comments of Assemblyman Pillittere at 147 (February 19, 1981 public hearing); Comment of Sister Margeen Hoffman at 156-7 (February 19, 1981 public hearing). Citizens Alliance at 6-7 (March 13, 1981); Comments of Ecumenical Task Force at 5 (March 1981); Comments of College Heights Property Owners Association at 3 (March 12, 1981); Letter from K. Kruger (March 13, 1981); Letter from J. Hale (March 18, 1981).

1. Response: The Settlement Agreement does not require immediate permanent relocation of residents. However, the answer to this question is really divided into four parts: (1) what does the available data show with respect to the need for permanent relocation (2) what the Settlement Agreement does require concerning present relocation; (3) what the Settlement Agreement does provide concerning relocation prior to initiation of Construction Activity; and (4) what the Settlement Agreement does provide concerning relocation during construction activity. (Also, see Response to Court Order of February 12, 1981.)

(a) Present Data

On the basis of the evaluation of data to date, ^{*}/ EPA and the State are of the opinion that the data does not warrant relocation of the residents in the Hyde Park - Bloody Run area. It is recognized that in matters that involve the protection of the public health, all doubt concerning the safety of such persons should be removed. Therefore, the State Department of Health intends to undertake a program to determine the scope of past airborne migration of particulates.

*/ As is indicated in response to Comment 3, all this data, except for confidential medical information, is now publically available. ✓

In considering the need for relocation EPA and the State reviewed five sets of data - measurements of the concentration of chemicals (1) in the surface soils around the landfill, (2) in the water and sediment in Bloody Run, (3) in the groundwater in the vicinity of the landfill and Bloody Run, (4) the results of the State health questionnaires sent to the residents near the Hyde Park landfill, and (5) the National Institution for Occupational Safety and Health (hereinafter referred to as "NIOSH"), Health Hazard Evaluation Report (No. 79-022-789) (hereinafter referred to as "NIOSH Report"). */ Each set of data was considered separately and in the aggregate. This data did not demonstrate the need for relocation. The sources of the data were the Environmental Protection Agency (hereinafter referred to as "EPA"), NIOSH, the New York Department of Environmental Conservation (hereinafter referred to as "DEC"), the New York Department of Health (hereinafter referred to as "DOH"), and Hooker Chemicals & Plastics Corp. (hereinafter referred to as "Hooker").

The Hyde Park landfill is located in the northwest section of the Town of Niagara, in an area which is basically industrial, although there is a residential area to the northwest (see Figure 1). On the north it is bounded by New Road; on the east by undeveloped property owned by TAM Ceramics, Incorporated; on the west side by three industries, Niagara Steel Finishing Company, Home Oil Company, and a monument works owned by the Paonessa family. The town line between the Towns of Niagara and Lewiston generally runs along the northern border of the Landfill Site. The Site itself is within the Town of Niagara.

Flowing from the northwest corner of the Landfill Site is a creek which is locally known as Bloody Run Creek. It flows from the Site above ground until it reaches New Road where it enters a culvert beneath New Road. It then flows in the open again until it reaches the Greif Brothers plant. It goes through a storm sewer beneath the Greif Brothers plant and through a culvert underneath Sherman Avenue. It flows above ground until it passes through a culvert under Belvedere Avenue and then flows again above ground until it enters a storm sewer at University Avenue which borders the Niagara University property. It flows through the storm sewer

*/ The NIOSH investigation began in March 1979. Nine summaries or interim reports were released between March of 1979 and April 1980, in addition to a draft report. All these prior reports are included in the NIOSH Report as Appendices. This report is Attachment I.

until it empties into a culvert and travels down the Niagara Gorge Face emptying into the Niagara River.

The general direction of groundwater flow is to the northwest toward the Niagara River (See Figure 1). The direction of the prevailing winds is from the southwest to the northeast (See Figure 1).

Bloody Run Data

EPA, State, NIOSH, and Hooker sampling have detected several organic chemicals, including 2, 3, 7, 8-tetrachlorodibenzo-para-dioxin (hereinafter referred to as "dioxin"), hexachlorocyclohexanes (hereinafter referred to as "BHC"), tetrachloroethylene, trichloroethylene (hereinafter referred to as "TCE"), mirex, and benzene, among others, in the water or sediment of Bloody Run Creek at several points ranging from the northeast corner of the landfill to the toe of the Niagara Gorge face. The concentrations found were in the parts per billion (microgram per liter or kilogram) range.

The existence of these chemicals at these levels at the locations where they were found creates the risk (or possibility) of harm. However, to actually cause harm, there must be human exposure, i.e., the chemicals must be ingested, inhaled, or absorbed through the skin (see the response to comment 79).

The chemicals currently in the water and sediments can cause harm to humans only if people were to drink the water or come into contact with the sediment or water. The water has never been used for drinking. Furthermore, accidental exposure through people wandering into or along the creek is currently avoided by a fence which prevents access. It is, therefore, unlikely that present harm is being caused to residents. In order to eliminate even the risk of harm, however, the Settlement Agreement requires Hooker to ensure that the landfill is no longer a source of chemicals and to clean up Bloody Run and all soils which contain chemicals from the landfill to the Niagara River.

Based on the available evidence including the levels of the chemicals detected, the locations of the chemicals, the solubility and other physical properties of these chemicals, the fact that surface water flows along discrete drainage paths (i.e., the Bloody Run Creek bed), and the fact that the chemicals are attached to sediments and not likely to migrate, the judgment of the Federal and State governments is that it is highly unlikely that these chemicals have migrated from Bloody Run into or in close proximity to any homes. However, under the Settlement Agreement, this evaluation must be verified by actual measurements. Paragraph C of Addendum I. Paragraph C(8) and C(9) of Addendum I provide

a mechanism to clean up chemicals attributable to the landfill, if found.

Soils

The surface soil measurements by EPA, NIOSH, the State and Hooker, taken in close proximity to the landfill, have detected organic chemicals, including dioxin, BHC, trichlorophenols and hexachlorobenzene in the parts per billion (hereinafter referred to as "ppb") range.

The information available on the physical characteristics of organic chemicals in soil and the process by which such chemicals move indicates that the distance organic chemicals can move is limited. Additionally, the source (the landfill) is now capped; therefore no more chemicals are moving from the surface of the landfill. Based on the available evidence including the facts stated above and the locations and concentrations of the chemicals detected, it is the judgment of the Federal and State governments that it is highly unlikely that chemicals have migrated through the soil to the soil around the homes in the Hyde Park Bloody Run area. The perimeter capping survey and Bloody Run surface soil survey will verify the extent of migration once the Settlement Agreement is approved. Paragraphs B, G, and H of Addendum I. If the sampling and analysis demonstrates the presence of chemicals in the soils, attributable to the Hyde Park landfill Hooker will be required to clean up the chemicals attributable to the landfill as part of its Requisite Remedial Technology study under Paragraph C(8) of Addendum I and, if EPA or the State believed relocation was necessary, it could be sought under the procedures of Paragraph C(9).

Dust

The NIOSH study detected ppb "quantities of dioxins, mirex, and lindane (one of the isomers of BHC) in the settled dust samples taken from (the rafters in the factories near the landfill ...)" NIOSH Report at 1, 9; Appendix C of NIOSH Report (released April 1980). These results "suggest that airborne exposures to ... [dioxin] have occurred in the past. The extent, degree or timing of possible worker exposure is, however, well beyond conjecture and cannot be determined from the sample results." Appendix C Document 1 at 1, NIOSH Report, also NIOSH Report at 13.

Numerous factors were evaluated including the fact that the concentrations in soil are low, the prevailing wind patterns are generally away from the homes (although on any given day the wind may blow in any direction), the concentration of dust generally decreases substantially as distance from the source increases (the nearest home is approximately 800 ft. from the Hyde Park landfill),

and dust is continually being removed from homes. It is the judgment of the Federal and State governments that the existing data does not warrant permanent relocation of the residents of the Hyde Park - Bloody Run area. The only way to determine with absolute certainty whether there is chemical-laden dust from the Hyde Park landfill in the homes is to actually sample. Given the concerns about migration of chemical-laden dust to the residential areas, the State will initiate within 60 days after approval of the Settlement Agreement, a program to determine past migration of particulates (see (b), below). Paragraph M of Addendum I also provides for a method to remedy such contamination if it is found.

There is no possibility of actual exposure once the dust is removed. The dust must be disturbed and inhaled or absorbed through the skin for the harm to occur. As in the case of the industrial plants, if all the chemical-laden dust is removed, even the risk of exposure to humans is eliminated.

In order to properly interpret the NIOSH data, however, one must understand that the dioxin levels detected in the rafters at the industrial plants (e.g. 7 ppb at NL Industries) was accumulated over approximately thirty years. The actual level of dioxin in the airborne dust each day during that period would be substantially lower than the level that was found on the rafters. It is particularly important to emphasize that one cannot compare even the level of dioxin in the airborne dust with the EPA water quality criteria human health assessment levels because the water quality criteria assessment levels are based on ingestion of dioxin in drinking water, not inhalation or absorption through the skin. See the response to Comment 79.

Groundwater

EPA, State and Hooker sampling data show that the shallow groundwater wells located between Greif Brothers and the Landfill contain organic chemicals, such as phenols, benzene, tetrachlorobenzene, and trichlorophenols, at medium-to-high ppb concentrations. The groundwater wells north of Greif Brothers along Bloody Run have been measured as having either no detectable levels or trace levels of organic chemicals. Specifically, the wells used by the residential homeowners along Bloody Run have been tested by EPA, the State and Hooker during the period from 1979 to 1980 and no chemicals, associated with the landfill, have been detected. Some residents have been repeatedly advised not to use these wells because of the presence of unacceptable levels of coliform bacteria (which cannot be from the landfill). */

*/ EPA has no statutory authority under the Safe Drinking Water Act over drinking water wells which supply less than 25 people or 15 connections. 42 U.S.C. §1412.

Groundwater, compared to surface water, moves extremely slowly, anywhere from inches to feet per year. [Based on the evidence available including the direction of the groundwater flow in this area (toward the northeast), the slowness of the movement of groundwater, and the fact that existing well measurements indicate that there are no toxic chemicals in the groundwater in the vicinity of the College Heights homes, it is the judgment of the EPA and the State governments, that the groundwater in the vicinity of College Heights is not yet contaminated. However, as can be seen in Figure 6 of the Settlement Agreement, the Offsite survey will determine conclusively whether chemicals from the Landfill have migrated north of Sherman Avenue. The side agreement with the Town of Lewiston requires Hooker, within 30 days of the effective date of the judgment, to retest the residential wells and, if necessary, to provide an alternative water supply. Paragraph C of Addendum I. Also Paragraph C(8) and C(9) of Addendum I provide a means of remedying such contamination, if found. The Settlement Agreement provides for several methods of containing and cleaning up groundwater contamination that does exist (Paragraph D of Addendum I).

Health Studies

The NIOSH study was begun as a result of requests from the Occupational Safety and Health Administration for technical assistance (on March 13, 1979) and the United Steel Workers of America and the Oil, Chemical and Atomic Workers of America for a health evaluation. The NIOSH study involved two parts: sampling of water, soil, sediment and dust in and around the factories near the landfill and the performance of a medical study involving over 400 workers and residents (the details of this medical study will be described in response to comment 11, infra). NIOSH Report at 4-8.

This study "did not document any consistent pattern of health effects attributable to exposure to substances from the landfill." id. at 2.*/ Also, "[b]ased on the participant's questionnaires and laboratory tests, there was no indication of excess cancer, heart disease, thyroid problems, jaundice, nervous system dysfunction, or anemia [and although] the Hyde Park group had some slightly different blood and urine test results than the ... [control group] none were outside the range of normal, and none appeared to be of any biological significance." id. at 10; also see id. at Appendix C - Document 1 at 3. Out of the 55 participants whose blood were analyzed for mirex and lindane, none had any detectable levels of

*/ The inherent problems with using epidemiological studies to determine health effects will be discussed in the response to comment 12, infra.

mirex and at least nine had low parts per billion levels (less than 3 ppb) of lindane. Id. at 12. Since mirex is a good indicator of exposure to chemicals from the landfill and lindane is used in weed killers and could be from other potential sources, this finding does not necessarily demonstrate that there has been exposure from the landfill in the past.

The most significant findings of the study were environmental, i.e., that mirex, lindane (an isomer of BHC), and dioxin were detected in the dust inside the factory and in the sediment in Bloody Run Creek and "[t]here is no reasonable source, other than the landfill, of the mirex found in the buildings and in the sediment of Bloody Run Creek." id. at 8 and 14. However, "[n]o quantitative measures of exposure were available. In fact, whether exposures to the most potent substances in the landfill actually occurred cannot be determined. The absence of significant excesses of adverse health conditions in the study may be the result of a lack of biologically significant exposure as well as the limitations of the methodology." id. at 13-4; also see id. at Appendix C - Document 1 at 1 and Appendix C - Document 2 at 1-2.

The conclusion that the Federal and State governments draw from the NIOSH Report is that the dust samples indicate that there may have been past exposure of chemicals from the landfill to workers. The landfill is now closed and will be reopened during the remedial work only under a stringent health and safety plan [Addendum V], which is designed to ensure that there will be no future exposure.

One commentor referred to a medical consultant's report on the health of employees in the surrounding industries that concluded that "history and medical symptoms provide convincing evidence that workers ... are experiencing hazardous exposures to toxic and carcinogenic chemicals." Comment of Niagara County Citizens Alliance at 10 (March 13, 1981). That report also stated that "significance of the cancers is unclear ... [and] it is impossible at this point to rule out occupational exposures ..." as a cause of the symptoms. It is clear from the context of the report that the history and

symptoms referred to are the skin rashes, respiratory problems and nausea reported after exposure to particulates and aerosols from the landfill. The report did not have data on nor did it purport to compare the incidences of health effects to a control group. It is mainly anecdotal. As described more fully in (c) below, the small number of participants in this study make conclusions concerning the existence of health effects from this data unreliable.

Any past exposures to particulates and aerosols were substantially eliminated when the landfill was capped. Any existing route of exposure from the landfill will be removed through the implementation of this Settlement Agreement. The workers at the surrounding industries will be protected to a degree greater than OSHA standards. See the Response to Comment 59.

The main recommendation of the above-mentioned consultant's report was that a medical epidemiological study be performed. The NIOSH medical study fulfilled that recommendation.

Finally, the State DOH also obtained information from 43 residents of the Hyde Park-Bloody Run area concerning respiratory ailments. As described more fully in the response to comment 11(c), the small number of people in the survey, and the inability to determine the cause of the ailment, lead to the conclusion that this information, alone, is essentially uninterpretable.

Conclusion

EPA and the State are of the opinion that the existing data does not warrant permanent relocation of the residents of the Hyde Park - Bloody Run area. However, in order to collect additional and definite data on this point the State DOH will undertake the airborne particulate study described below.

(b) Present Relocation Options

The State Department of Health intends to undertake a program to determine in a scientifically rigorous fashion the scope of past airborne migration of certain chemicals from the Hyde Park landfill. The State is committed to the initiation of the program no later than 60 days following the Court's approval of the Settlement Agreement.

In the event that the results of the study, or evidence from any other source, show that airborne particulates have migrated from the Hyde Park landfill in the past and it is determined that such migration constitutes an endangerment to human health and the environment, Paragraph M of Addendum I requires Hooker to "initiate corrective action as soon as possible to clean up such particulates and take other appropriate actions incident thereto which are required to protect human health and the environment." In these circumstances, EPA and the State could petition the Court to order the relocation of certain residents of the Hyde Park - Bloody Run Area as one of the "actions incident" under this paragraph.

Additionally, as described above, if the surveys of surface soil or groundwater performed by Hooker under the Settlement Agreement demonstrate that chemicals have migrated through the soil or groundwater from the Hyde Park landfill into or in close proximity to homes, Hooker will be required as part of its remedial study (Paragraph C(8) of Addendum I) to propose methods to clean up such chemicals and protect the residents. As part of a Requisite Remedial Technology plan, Hooker might have to permanently relocate persons living in those homes. If EPA/State's proposals under paragraph C(9) of Addendum I contain plans to permanently relocate the residents and Hooker does not agree under the procedures in paragraph C(9) of Addendum, the dispute will be resolved by the Court.

(c) Relocation Prior to Initiation of Construction Activity

The second circumstance relating to relocation concerns residential properties which will abut the construction area as defined in the Settlement Agreement. Paragraph L of Addendum V provides that during the time construction activities preclude the residential use of property, its residents will be relocated. The paragraph also describes safety and security measures that Hooker must undertake during such relocation and the environmental criteria which must be satisfied before residents may reoccupy their homes following such relocation.

Based on preliminary construction plans being developed by Hooker, Hooker believes that, in lieu of implementing the temporary relocation provisions of Paragraph L, it would be more expeditious and therefore in the public interest for it to purchase all nine of the properties upon which or adjacent to which construction is likely to occur. To that end, Hooker has offered to purchase these properties at their present fair market value as established by independent appraisal (without consideration given to conditions

which the construction activities set out in the Settlement Agreement are designed to address), plus ten percent of that fair market value for moving expenses. See Letter from Hooker to the Court (March 24, 1981).

(d) Relocation During Construction Activity

The third circumstance relating to the relocation of residents concerns the possibility of airborne particulate migration resulting from remedial activities in the Hyde Park - Bloody Run Area. At the outset it should be emphasized that the provisions of the Safety and Health Plan set out in Addendum V have been designed, and will be vigorously enforced, to minimize the risks of any such particulate migration. Prior to beginning construction, Hooker is required to demonstrate by a field test that Hooker's suppression procedures are capable of preventing airborne particulate migration. (Addendum V, ¶G[6]). To assure this objective, ambient air monitoring stations will be placed at representative locations outside the perimeter of the construction area. The number and locations of the monitoring stations will be based on best available information, including the Bloody Run Options Evaluation (Addendum I, Paragraph F), and will be subject to review and approval by EPA and the State.

If analysis of dust from any two of these monitoring stations show an excursion of dust containing chemicals at levels over specified concentration levels, Addendum V provides that Hooker, after immediately notifying EPA and the State, may be required to survey the residential and commercial properties in the vicinity of these monitoring stations in order to confirm the presence of dust containing chemicals in excess of the specified levels on the properties. If EPA, the State, and Hooker agree, or if the Court finds, that such migration of dust particles has resulted from Hooker's construction activities, Paragraph J(5)(c) of Addendum V requires Hooker to take all necessary corrective action to clean up the dust particles. This paragraph explicitly provides for the possibility of relocation during clean-up activities. However, relocation is not required if it is determined that relocation is unnecessary to protect against endangerment to human health. Prior to the beginning of construction, Hooker will submit detailed contingency plans which will describe how people will be notified when the dust limits are exceeded and will list those identifiable circumstances which would require relocation. Paragraph J(e) of Addendum V.

2. Comment: As the extent of contamination is more clearly defined, provision must also be made for the possibility of further property purchase by Hooker. Comment of Councilwoman Joan Gipp at 4 (both in writing and at February 19, 1981 public hearing).

2. Response: The Settlement Agreement already provides for such possibility. As was described more fully in response to Comment 1, under Paragraphs M and C(8, 9) of Addendum I of

the Settlement Agreement, in the appropriate circumstances the Court may order Hooker to purchase additional property if there is an endangerment to the resident and that is an appropriate remedy.

3. Comment: Upon what information was the governmental decision made that relocation is not yet required. Barbara Morrison at 169 (February 19, 1981).
3. Response: The information upon which the Federal and State governments based their decision that permanent relocation is not yet required is described in the Response to Comment 1. This information except for confidential medical information is now publically available.
4. Comment: During the entire period contemplated for excavation and capping, local residents are expected to continue to live in the area despite the risks presented by the disturbance of chemically contaminated soils and dust. Affidavit of Stanley Grossman at paragraph 17; also Comments of Ecumenical Task Force at 13.
4. Response: As described in more detail in the Response to Comment 1, under Paragraph L of Addendum V of the Settlement Agreement residents will be relocated. Also as described in more detail in the response to Comment 1, the health and safety plan (Addendum V) is designed to minimize the risk of exposure to the residents.
5. Comment: The proposed settlement proposes only temporary relocation of residents and only in the event that air monitoring data shows a threat to human health. Such objective tests are inadequate. Affidavit of Stanley Grossman at paragraph 20.
5. Response: The Settlement Agreement requires only temporary relocation although as described more fully in the Response to Comment 1, above, there are procedures which could result in permanent relocation. Of course, independent of the Settlement Agreement, Hooker has offered to purchase nine residential properties in the Bloody Run drainage basin. The Addendum V procedures which would result in temporary relocation do allow Hooker to demonstrate that relocation is unnecessary to protect against endangerment to human health.

The comment that "objective" tests are being used and should not be used is difficult to understand.

In making any governmental decision (either within the context of litigation or in the normal agency operation) there are numerous objective factors that must be used to determine whether there is an endangerment to human health or if relocation is warranted. Under our legal system governmental entities, in order to obtain judicial relief, must present evidence to demonstrate to the Court that they are entitled to such relief. Such evidence includes objective data, scientific assumptions, and expert opinions. The Federal and State governments recognize that in areas on the 'frontiers of science' scientific uncertainties must be resolved in favor of protecting the public health. That resolution, however, does not require a presumption that harm is occurring in the absence of objective data to support it. Any final decision on relocation is a judgment which must encompass objective facts.

6. Comment: Under Addendum V all the factors necessary to trigger relocation would be virtually impossible to occur therefore relocation would never occur. Letter from Councilpersons Joan Gipp and William Heinz at 2 (February 9, 1981).
6. Response: The Federal and State governments have structured the Settlement Agreement so that relocation during construction is not likely to occur. The Settlement Agreement ensures through prior field tests of the dust suppression procedures that chemical-laden dust does not leave the construction site.

The factors listed in Addendum V that must occur are the chemical-laden dust from construction activities must leave the site, be detected in residential areas, and such dust must present an endangerment, i.e. the risk of harm. Paragraph J(5) of Addendum V. All of these are essential elements in any decision to relocate, i.e. if chemical-laden dust never leaves the site, is not detected in the neighborhood or is not presenting a risk of harm, there is, by definition, no need to relocate since there is not a risk of harm. The Settlement Agreement is structured to minimize the time between the possible release of dust and the determination on relocation. In order to further expedite this process, contingency plans, describing details of relocation procedures will be prepared before construction starts. Paragraph J(5) of Addendum V.

7. Comment: One commentor claimed that high levels of public exposure are unavoidable in large toxic chemical clean-up operations such as the one proposed and alleged that similar operations at Love Canal resulted in increased chemical exposures to local residents, a rise in health problems, and a massive relocation. Affidavit of Stanley Grossman at paragraph 18.

7. Response: EPA's experience in the approximately 57 hazardous waste cases filed to date and numerous emergency response actions undertaken is that if sufficient precautions are taken, such as those specified in Addendum V of the Settlement Agreement Judgment, the clean up of toxic chemicals can be performed without increased chemical exposure to the public. [The Federal and State relocations performed at Love Canal in 1980 were in response to an accumulation of evidence indicating that past and present exposure to chemicals may be endangering the public, not as a result of the prior remedial construction at Love Canal.]
8. Comment: Violation of the Addendum V Health and Safety plan action limits is based on an increase over background. Since that level is not defined and because there may be no safe background in Niagara County, this limit may be inadequate. Letter from Councilpersons Joan Gipp and William Heinz at 2 (February 9, 1981).
8. Response: Addendum V dust limits are based on an increase above background. This type of limit is necessary because there is an ambient or background level of dust everywhere. In essence this provision requires Hooker not to cause any more dust to be in the air during construction than when there is no construction. This is an exceedingly stringent standard. As part of Hooker's field test of the dust suppression procedures, Hooker, subject to the review of EPA and the State, will determine the background dust level. Paragraph G(5) of Addendum V.

It is not meaningful to describe dust levels in terms of safe or unsafe. See the response to comment 79. It is the concentration and type of chemicals in the dust which determines what the risk of harm from the dust is. Whatever levels of chemicals exist in dust in Niagara County, there is nothing more that this Settlement Agreement can do to change that level. The Settlement Agreement, however, does impose not only dust limits but chemical limits for dust from the Construction Activity. At least the population will not be exposed to chemicals above background limits from the Hyde Park remedial construction.
9. Comment: There is no provision in the agreement dealing with the dislocation of employees in plants within construction areas. Letter from E. Giroux, United Steel Workers at IV (March 5, 1981); Comments of Mr. Gibson at 50 (February 19, 1981 public hearing); Citizens Alliance at 6.

9. Response: Paragraph L(2) of Addendum V of the Settlement Agreement requires Hooker to:

- (a) inform the management of commercial establishments which abut the Construction area that construction will occur;
- (b) inform the management of the more detailed Safety Plan that will be prepared before construction; and
- (c) restrict construction in chemical-laden soils which is within 50 feet of the plant to non-working hours.

Under this provision no construction near the plants will occur during working hours.

If the dust monitors established under Paragraph J of Addendum V indicate chemical-laden dust has reached any plant, under J(c) of Addendum V Hooker is required to "initiate a survey of residential and commercial properties in the vicinity ... [and to] cleanup such particulates." (emphasis added) p. V-17-18 of Settlement Agreement. Although Paragraph J(c) concentrates on temporary relocation of residents, appropriate corrective action may under some circumstances include temporary relocation of employees. *not say so*

10. Comment: Because of past incidents of contamination and proximity to the clean-up site, there should be provision for an initial survey and continuing monitoring of the plants. Letter from E. Giroux, representing United Steel Workers at IV (March 5, 1981).

10. Response: The NIOSH Report indicates that each of the nearby plants it monitored had all chemical-laden dust removed in 1980. NIOSH Report, at Appendix C - Documents 2 and 9). Since the Hyde Park landfill has been closed and capped during the entire time since then, there should be no additional chemical-laden dust entering the plants from the Hyde Park landfill.

There will be dust monitoring around the construction site and throughout the area including near the industries during construction. Paragraph J(5)(a) of Addendum V. Also see Response to Comment 9, above.

B. Health Tests

11. Comment: There should be immediate health testing to determine the past effects of chemicals leaving the landfill. Affidavit of Stanley Grossman, representing several residents (February 9, 1981) at paragraphs 6, 21, and 23; Letter from Alvin Ogg at 2 (February 10, 1981); Letter from Fred Armagost at 2 (January 29, 1981); Letter from Councilman William Heinz at 2-4 (February 18, 1981); Letter from Councilman Alvin Ogg at 7, 10 (February 21, 1981); Letter from G. Martin at 1 (February 23, 1981); Letter from C. Shonnard at 1 (February 24, 1981); Letter from R. Jackel (March 4, 1981); Letter from Mr. and Mrs. Mazaika (received March 6, 1981); Citizens Alliance, at 4 and at 111-2 (February 19, 1981 public hearing); Response Form from T. Rafferty (received March 6, 1981); Letter from E. Giroux, representing United Steel Workers at IV (March 5, 1981); Comments of Councilman Alvin Ogg at 63-4 (February 19, 1981 public meeting); Comment of Stanley Grossman at 67 (February 19, 1981 public hearing); Comment from Councilman William Heinz at 96-7 (February 19, 1981 public hearing); Comment of Assemblyman Pellittere at 148 (February 19, 1981 public hearing); Comment of Norman Martelli at 153 (February 19, 1981 public hearing); Comment of Sister Margeen Hoffman at 157 (February 19, 1981 public hearing). Citizens Alliance at 7; Comments of Ecumenical Task Force at 5; Comments of College Heights Property Owners Assoc. at 3; Letter from K. Kruger (March 13, 1981); Letter from J. Hale (March 18, 1981).
11. Response: The response to this comment is appropriately divided into three parts: (a) what medical and health tests have already been performed; (b) what future medical or health tests or follow ups are planned; (c) what are the inherent limits and shortcomings of such medical tests.

(a) Existing Medical and Health Tests

Neither the Federal nor State government waited for the conclusion of this lawsuit to perform medical studies. As part of the NIOSH study in the spring of 1979, NIOSH initiated a medical study of present workers, past workers, and residents in the vicinity of the Hyde Park landfill. The study was "not designed to be a comprehensive study of all possible health effects resulting from exposure to all of the chemicals from the landfill but rather, it was intended as an expeditious targeted response to the specific concerns of the affected employees ... and public officials." NIOSH Report at 5. The medical study included the following:

- 1) the filling out of a health questionnaire which obtained a general medical and occupational history;
- 2) a limited physical examination, which included measurement of blood pressure, inspection of the skin of the upper half of the body, inspection of the mucous membranes of the nose and oral cavity, palpation of the thyroid gland, and measurement of liver size by percussion;
- 3) blood tests, including a complete blood count with differential white blood cell count, liver enzymes (GGTP, SGOT, SGPT, alkaline phosphatase), and serum creatinine;
- 4) a routine urinalysis with microscopic examination; and
- 5) blood analysis for two organic chemicals, lindane and mirex. Lindane and mirex were chosen since they were known to be in the landfill and were the chemicals most likely to be detectable several years after exposure.

The information obtained was provided to each individual and was used in a cross-sectional morbidity study */ in order to determine if an unusual rate of adverse health effects could be observed.

The people who were given the opportunity to participate in the study were all present and past employees (18 and older) of NL Industries, Niagara Steel Finishing, and Grief Brothers (including the former employees of the small business which was located at the site now occupied by Grief Brothers), the Niagara Monument Works, Plaza Self-Service Mobil Station, and Niagara University maintenance department personnel, and all residents of the neighborhood between Grief Brothers and Niagara University (i.e., the College Heights area).

People were notified directly by announcements posted or distributed at the plant and by requests to union representatives (the current employees of NL, Niagara Steel Finishing, Grief Brothers, the Monument Workers, Mobil Station, and Niagara University) and by letters to the last known address (former employees of NL, Niagara Steel Finishing, and Grief Brothers), as well as indirectly by notices to all radio and television stations. A second testing was arranged for those persons who missed the June 4-8, 1979 test. NIOSH personnel performed the tests both during the day and evening for the convenience of the public. id. at 7.

*/ A cross-sectional morbidity study is a comparison of the rate of disease in two groups which have been matched in background, age, sex, etc.

Overall 428 people participated in the study, including 13 children under the age of 12 and 5 between 13 and 17. According to NIOSH, approximately 90% of the residents in the area participated, as well as 59% of the current employees, and 13% of the former employees. id. at 10 and Table 6.

As described in the Response to Comment 1, the NIOSH Report failed to find any health effects which could be attributable to the Hyde Park landfill.

The State DOH also obtained information from 43 residents (11 families) of the Hyde Park - Bloody Run area concerning respiratory ailments. As described more fully in (c) below, the small number of people in the survey makes analysis of this data unreliable. The type of respiratory problem found, such as asthma like symptoms, can be caused by numerous factors, including uncontaminated dust, certain types of bacteria, and animal hair, all of which the residents in the area are known to be exposed to. Other data might allow an association to be made.

(b) Future Medical and Health Studies

The NIOSH medical study sought the participation of as many people as could possibly have been affected by the landfill, as described supra. Given the extensive media and public attention chemical waste problems have received in the Niagara County area for many years, we agree with NIOSH's conclusion that the participation rate in any new study would not significantly increase, particularly among the residents in the College Heights area (90% of whom already participated). The NIOSH report itself concluded that the "experience and data from this study do not suggest that expanding the study to include additional people working or living in the area of the landfill would be useful ... [n]or would it seem productive to undertake additional medical studies of the participants in this study." NIOSH Report at 14. */

*/ Under Section 104(i) of the recently enacted Comprehensive Environmental Response, Compensation, and Liability Act, (hereinafter referred to as "Superfund Act"), 42 U.S.C. §9604(i), the newly created Agency for Toxic Substances and Disease Registry has been given authority to provide medical care and testing for persons exposed to toxic substances in case of public health emergencies. 94 Stat. 2778.

As will be described in (c) below, the view of many epidemiologists and public health agencies, including State DOH, is "the use of cross-sectional morbidity studies to evaluate the public health effects of chemical disposal sites is inefficient, insensitive, and thus destined to be inconclusive. The apparent negative results of such studies, including ... [the NIOSH Report], should not be construed as minimizing the public health problems posed by inadequate methods of chemical waste disposal. Such studies should not be promoted or endorsed by public health agencies as a primary method of addressing the issue." NIOSH Report at 15.

Both the Federal and State governments believe the best health studies in chemical waste disposal situations are those that: (1) identify through sampling and analysis which and what concentrations of chemicals are present in the air soil, sediment, water, groundwater, and, where appropriate, in dust; (2) examine the toxicity of those chemicals; (3) determine the exposure of humans to the chemicals; and (4) quantify the risk of harm from that exposure.

As has been mentioned in the response to prior comments, DOH intends to undertake such an environmental health testing program to determine the scope of past airborne particulate migration from the Hyde Park landfill. The State is committed to the initiation of this program no later than 60 days following the Court's approval of the Settlement Agreement. Also, the sampling and analysis program required by the Settlement Agreement will be initiated immediately upon the effective date of the Settlement Agreement.

Finally, under Section 104(i) of the recently enacted Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter referred to as the "Superfund Act"), 42 U.S.C. 9604(i), there is

established within the Public Health Service [which is part of the Department of Health and Human Services] an agency, to be known as the Agency for Toxic Substances and Disease Registry ... The Administrator of said Agency shall ... in cooperation with the States, establish and maintain a national registry of persons exposed to toxic substances ...

94 Stat. 2778. At this point it not known when the registry will become operational or how it will operate. Decision on which populations would be eligible for the registry will depend on a review of each situation and cannot be determined now.

(c) The Inherent Limits and Shortcomings of Medical Tests

The NIOSH Report itself lists seven inherent shortcomings of medical tests and epidemiological studies which attempt to determine what, if any, health effects are attributable to chemicals from landfills:

- 1) "few, if any, health effects ... are uniquely the result of exposure to substances in the landfill." NIOSH Report at 8;
- 2) one must have a control group against which to compare the studied population. In the NIOSH study a prior large scale survey was used as the control. id. at 7. Those participating in the NIOSH study who were younger than 25 years old, retired and neighborhood residents did not have a specific control group. Their results were examined against generally accepted "normal" values. id.
- 3) only the prevalence of disease not the risk of disease can be accurately determined. id. at 13;
- 4) people who did not participate in the study because of illness, death, or lack of interest could be the people actually who have adverse health effects of greatest concern. id.;

- 5) because there is a latency period in many diseases, i.e., a lag time between when the exposure to the chemical occurs and the onset of the disease, the effects may not yet be observable. id.;
- 6) there are no quantitative measurements of exposure at the Hyde Park landfill. id.; and
- 7) the effects could be due to occupational exposure. id. at 14.

The nature of the measurement and quantification of the harm from chemical carcinogens and other environmental hazards sharply differs from the traditional type of harm where there is an observable and well established step-by-step link between cause and effect.

There is no single test that can be performed which would determine with scientific certainty that an individuals' disease or illness was caused by chemicals, as opposed to the numerous other potential causes. Scientists and public health agencies, therefore, must examine a wide range of tests and weigh the cumulative information, because each test, in itself, is at best suggestive, indicative or inferential.

For all chemicals generally, a larger quantity of a harmful substance will cause more damage or harm than a smaller quantity. There is considerably less dispute concerning acute effects because such effects are readily observable. [Latent effects, especially cancer, are difficult to detect primarily "owing to a 20-to-30-year latent period between initial exposure to a carcinogen and the appearance of most types of cancer." B. Ames, Identifying Environmental Chemicals Causing Mutations and Cancer, 204 Science 587, at 587 (May 11, 1979) (hereinafter referred to as "Ames.") R. Monson, Effects of Industrial Environment on Health, 8 Env. Law 663-79 (1978) (hereinafter referred to as "Monson"); Tenth Annual Rep., supra, at 194-6, 199; T. Page, A Generic View of Toxic Chemicals and Similar Risks, Ecology L. J. 207, 208, (1978) (hereinafter referred to as "Environmental Risks").

Epidemiological studies constitute one important source of data which must be considered in making health decisions related to possible chemical exposures. However, in situations like Hyde Park, certain limitations make epidemiological study design particularly difficult. Such problems include the limited number of individuals with potential exposure, the difficulty in defining and obtaining an appropriate control population, confounding bias (i.e., the possibility that there are other causes contributing to the effect), the need for substantial sample size or an extraordinarily potent effect, and perhaps most importantly, "people

would already have been exposed for decades by the time a particular cause of cancer was identified." Ames, supra, at 587; Monson, supra, at 663-79; Committee on Science and Technology, Hearings before the Subcommittee on the Environment and Atmosphere on the Cause and Effects of Chronic Exposure to Low-Level Pollutants in the Environment, 94 Cong., 1st Sess. xxvii-xxx (Comm. Print 1975); National Academy of Sciences, Report on Drinking Water and Health, 42 Fed. Reg. 35764, at 35578 (1977) (hereinafter referred to as "1977 NAS DW Rep.").

Furthermore, "negative epidemiological data [i.e., no statistically significant increase in the disease incidences over the expected level] may not establish the safety of suspected materials. Negative data on a given agent obtained from extensive epidemiological studies of sufficient duration are useful for indicating upper limits for the rate ..." at which the disease could occur as a result of a given rate of exposure. id. at 35778; also see EPA's Cancer Assessment Group, Problem Oriented Report on Procedures for Calculations of Water Quality Criteria 12 (July 31, 1980) (This document sets out the methodology by which all EPA cancer assessment must be performed. It is summarized in EPA, Water Quality Criteria Document; Notice of Availability, 45 Fed. Reg. 79318, 79349-53, 79379 (1980)); Environmental Risks, supra., at 220, 231.

Often, however, the failure to detect an effect in an epidemiological study is falsely interpreted by non-scientists as finding that there is no effect. id. at 231. The lower the dose the more critical the need for a large sample population. See for example, C. Land, Estimating Cancer Risks from Low Doses of Ionizing Radiation, 209 Science 1197 (September 12, 1980).

One limitation in using such epidemiological health studies to determine whether there is an adverse health effect arises from the statistical nature of the problem. See generally Monson, supra. Since most of the diseases which are caused by chemicals, e.g., respiratory problems or cancer, also have numerous other causes, in order to determine whether the incidence or the percentage of occurrence of a particular disease is caused by exposure to a chemical, one must compare the percentage occurrence of a disease in a group of people not exposed to the chemical (the control group) to a group which has been exposed. Ideally, the only difference between the two groups would be that one group was exposed to chemicals and the other was not. Unfortunately, it is rare that this is the only difference between the two groups. Any difference could be the result of a confounding factor.

Although one can determine the "normal" rate or percentage of occurrence of a disease by examining a large group of people, when one examines a small group of people, the percentage will vary due

to random fluctuations in the rate of disease. An example of this type of statistical random fluctuation is exhibited in coin flipping. Every time a coin is flipped there is a 50/50 chance (or probability) that the coin will turn up heads. If a large number of coin flips are done (e.g., greater than 1,000) heads will turn up 50% of the time (i.e., 500 times). Unless the coin is fixed, 95% of the time heads will turn up between 499 and 501 times. If 400 heads or 600 heads turn up, one can determine conclusively that the coin is fixed because such results are statistically different from the expected result.

When there is a small number of observations, e.g., 10 flips, 5 heads will turn up most often, but any result from zero to ten heads can occur. Each of the results has a certain chance of occurring. With such a small number of observations, one cannot determine whether any percentage of occurrence is statistically significant. In fact, the smaller the number of observations the less certain one is that the result is simply not within the normal statistical fluctuation.

This problem is the reason that both NIOSH and New York DOH have stated that the medical studies of the Hyde Park - Bloody Run residents cannot be meaningfully analyzed. NIOSH Report at 12; Attachment II; and Dr. A. Carlson at 78 (February 19, 1981 public hearing). This inherent problem is also why finding 13 respiratory ailments among 40 to 50 people is within the range of statistical probability. With such small numbers of people examined, adverse health effects would only be apparent if the effect of the cause was extremely potent or the health effect was extremely rare, e.g., a rare liver cancer (angiosarcoma of the liver) caused by vinyl chloride. Monson, supra, at 675-79.

Because of all the inherent difficulties cited above, most public health agencies avoid use such medical or epidemiological studies in conjunction with other relevant data, to determine whether there are adverse health effects. Public health authorities must make their decisions based on a prudent interpretation of all available data, including sampling for the presence of chemicals and determining the extent of the endangerment based on the existing toxicological data concerning the chemicals detected, as well as their epidemiologic findings.

12. Comment: There is no indication that there are any sick people in the Hyde Park area because there has not been a confirmed study done (except for the NIOSH study). Comment of Fred Armagost at 81 (February 19, 1981 public hearing).
12. Response: As indicated in the Response to Comment 11, NIOSH performed a medical study.

Epidemiological studies, such as the NIOSH study, do not indicate that there are no sick people. In situations such as Hyde Park, they generally have difficulty determining that the illness is caused by chemicals.

13. Comment: Upon information and belief, NIOSH also believes that the proposed settlement requires public scrutiny. Affidavit of Stanley Grossman at paragraph 26(c).
13. Response: NIOSH has not taken any official position regarding the Settlement Agreement. NIOSH is not a named party to this lawsuit and has no involvement nor did it review the Settlement Agreement. (It should be noted that the final NIOSH Report had not been released when Mr. Grossman made these comments.)
14. Comment: The NIOSH report will confirm the latent pathogenic potential of these chemicals. Thus, many of the health problems which are mathematically certain to result from the massive exposure of the public for 27 years, have yet to appear. Affidavit of Stanley Grossman at paragraph 22.
14. Response: The NIOSH Report does not mention the term latent pathogenic potential. Although the report mentions there may be latent health effects, it does not discuss in any detail the potential effects of the chemicals. It does not state that effects are mathematically certain to occur. The responses to comments 11 and 79 discuss the limits and meaning of health studies and risk assessments. In fact, the NIOSH Report states that it cannot be determined whether exposures to the most potent substances in the landfill actually occurred. The absence of significant excess of adverse health conditions in the study may be the result of the absence of "biologically significant exposure" as well as the limitations of the methodology. NIOSH Report at 13-4.
15. Comment: The NIOSH Report will show that high doses of contamination could be experienced by those living near the landfill during excavation and clean up. Affidavit of Stanley Grossman at paragraph 9(c).
15. Response: The NIOSH Report does not show or state that high doses of contamination could be experienced by those living near the landfill during remedial work. Such an evaluation was not the purpose of the study. The report does state that the Hyde Park landfill should be contained. NIOSH Report at 2 paragraph 1. Also see Responses to Comments 13 and 14.
16. Comment: Paragraph 29 of the Federal complaint states that medical examinations of the residents and industrial workers

have indicated physical disorders associated with some of the chemicals identified in the complaint. Letter from Councilman William Heinz at 2 (February 18, 1981).

16. Response: Paragraph 29 of the Federal complaint states that:

Medical examination of the residents of the area near the Hyde Park landfill and medical studies of workers in nearby industries who have come in contact and continue to come in contact with air from the landfill or from contact with Bloody Run have indicated physical disorders associated with some of the chemicals ... [which have migrated from the landfill]

As explained in the Response to Comment 11 these disorders are caused by numerous agents. The complaint simply says that physical disorders of this type can be caused by these chemicals. It does not say that the medical studies demonstrate or prove that the disorders were caused by any specific cause. See also the response to comment 80.

(c) Personal and Property Injury Recoveries

17. Comment: The settlement does not compensate the residents or workers for past, present or potential adverse health effects or property damage. Letter from Councilpersons Joan Gipp and William Heinz at 1 (February 9, 1981); Letter from Fred Armagost at 2 (January 28, 1981); Comment of Councilwoman Joan Gipp at 2 (in writing and at February 19, 1981 public hearing); Letter from K. Kruger (March 13, 1981); Letter from J. Hale (March 18, 1981).

17. Response: There were several strong criticisms of the Settlement Agreement for not resolving individual personal injury claims and individual property damage claims. People in the Hyde Park area may have such claims; many lawsuits have been brought concerning those claims. It is a fact that the proposed agreement does not settle, compromise or otherwise resolve these individual claims.

As a general matter, under our legal system only the individual who has suffered personal injury or loss has the legal right to sue to satisfy that claim. This tenet is based on the judicial principle that the injuries a person may have suffered on account of the actions of another provide him or her alone with the personal right to seek redress and to receive compensation for that injury. The legal philosophy which underrules this idea encompasses the notion that each person is the best judge of his or her own interest when it

comes to seeking legal redress for personal injury. Additionally, in order to enable a court of law to resolve a claim, our legal system requires that the person seeking relief be sufficiently affected by the claimed wrong so as to have a right to the relief sought. This is called standing.

...The standing question is whether the plaintiff has "alleged such a personal stake in the outcome of the controversy" as to warrant his invocation of federal-court jurisdiction and to justify exercise of the court's remedial powers on his behalf. Baker v. Carr, 369 U.S. 186, 204, 82 S.Ct. 691, 703, 7 L.Ed.2d 663 (1962). See also Barlow v. Collins, 397 U.S. 159 (1970). Warth v. Seldin, 422, U.S. 490, 498 (1975). */

Precisely because the Federal government lacks the authority to sue to recover for personal injuries, the Senate last year proposed to include as part of the Superfund Bill a provision that would have allowed the Federal Government to compensate individuals for their personal and property injuries resulting from chemical waste disposal and would authorized the Federal Government to sue to recover those compensation costs. \$1480. See CEQ 11th Annual Report at 222-30 (1980) for a description of recent attempts to establish a system to compensate people for personal and property injuries from toxic wastes. The final version of Superfund that was enacted, however, does not contain any such compensation provision. The Settlement Agreement nonetheless preserves the Federal and State Governments' right to sue to recover such compensation costs, if such a statutory provision is enacted in the future. Paragraph 11(d).

All the survey and monitoring data which is generated as a result of the Settlement Agreement, all prior sampling and

*/ Of course, where a public nuisance exists, where there is harm or a threat of harm to members of the public, and in other instances, the State has standing to sue as parens patriae to redress the public wrong. (It is in part in this capacity, as parens patriae on behalf of the people of the state of New York, that the State sued Hooker in this case). In such instances, even though the State is said to be suing on behalf of all its citizens, its claim is based on the public wrong, and any damages it may recover or remedy it may obtain therefore accrues to the State as a governmental entity. Such damages do not represent, nor may they vitiate, the rights of individuals to sue on their own private claims.

analysis data, and all future governmental sampling and analysis data are or will be made public. Each individual can examine this data and determine how it affects his or her rights and then determine whether to sue.

18. Comment: What effect will the Settlement Agreement and remedial plan have on the property assessments in the area? Response Form from Mr. and Mrs. Shanahan (February 27, 1981); Mr. and Mrs. Barney (March 5, 1981); letter from Mr. & Mrs. Machelor (March 1, 1981).
18. Response: The Settlement Agreement will result in the containing of the chemicals within the landfill and the clean up of chemicals which have left the landfill. To the extent that the property values may have been affected due to chemicals migrating from the landfill one might expect such effect to be eliminated.
19. Comment: "We do not accept the legal reasoning behind ... [the] conclusion [that there are adequate legal remedies at law for the local residents] ... Rather, we believe, the Government has an independent and specific responsibility to look after and care for its people. We believe that the consent decree has ignored this responsibility" Statement of Citizens Alliance at 5 and 115 (February 19, 1981 public hearing); Citizens Alliance at 2 (March 13, 1981).
19. Response: This comment appears to recognize that there is no statute, case, or legal theory that would support a legal action requesting a court to award the Federal or State Governments money to compensate an individual for his personal injury. See the response to comment 17.

The government's responsibility to protect the public has been served by this Settlement Agreement to the greatest extent possible within the legal framework described in response 17. The Federal and State governments recognize their duty to protect and care for their citizens. This is why the lawsuits were filed and the Settlement Agreement negotiated.

(d) Specificity and Dispute Resolution

20. Comment: The technology and safety measures required by the consent judgment must be more specific and sophisticated. More particularly, some commentators stated that capping, incineration, and landfilling are not the best available technologies.

Everything should be specified in the agreement and there should be no dispute resolution mechanism. Letter from Councilpersons Joan Gipp and William Heinz at 2 (February 9, 1981); Letter from Councilman Alvin Ogg at 2 (February 10, 1981); Letter from Councilman Alvin Ogg at 5, 8, 10 (February 21, 1981); Letter from G. Martin at 1 (February 23, 1981); Comment of Councilwoman Joan Gipp, Town of Lewiston (both in writing and at February 19, 1981 public hearing); Comment of Councilman Alvin Ogg at 5 (February 21, 1981); Letter from Councilpersons Joan Gipp and William Heinz at 2 (February 9, 1981); Letter from Councilman William Heinz at 5 (February 18, 1981); Comments of Sierra Club et al. at 4 paragraph 4; Comments from Citizens Alliance at 7; Comments of Councilman Alvin Ogg at 63 (February 19, 1981 public hearing). Letter from Kieffer to Barbara Morrison (March 3, 1981) Attachment B comments of Ecumenical Task Force at 2; Comments of College Heights Property Owner Association at 6; Letter from K. Kruger (March 3, 1981); Letter from J. Hale (March 19, 1981).

20. Response: The comments referred to above, questioned not only the alleged lack of specificity, the use of a dispute resolution mechanism, and the use of Requisite Remedial Technology (as opposed to best available technology), but also questioned the use of certain specific technologies-capping, landfilling and incineration. The response to this comment must be viewed in the context of chemical waste problems generally.

(i) Dispute Resolution Mechanisms

Contrary to the commentators' claims that the Settlement Agreement does not specify sufficient details, it should be emphasized that most remedial technologies which Hooker must undertake are specified by the Settlement Agreement and, if effective, do not require reference to the Requisite Remedial Technology or dispute resolution concepts. These technologies include the technologies applicable to (a) barrier-collection systems, Paragraph D of Addendum I; (b) capping and closure of the Hyde Park landfill and the areas adjacent to its perimeter, Paragraphs B, K, and L of Addendum I; (c) clean-up, excavation and/or capping of the Bloody Run Basin; Paragraphs C, F, and G of Addendum I; (d) the Gorge area clean-up, Paragraph I of Addendum I; (e) the treatment and disposal of collected materials, Paragraph E of Addendum I; (f) the survey, tests, and other studies, Paragraph C of Addendum I; (g) monitoring and maintenance of the remedial programs, Addenda II and III; and (h) the health and safety procedures during construction activity associated with the remedial program, Addendum V. This Settlement Agreement has

more specific details than virtually any other chemical waste case (see the four consent decrees included in Response to Court Order of February 12, 1981). Inclusion of detailed plans and specifications in a consent judgment is normally not done and is indeed inappropriate.

The problem of how to determine a remedy without knowing the complete dimensions of the problem is inherent in all chemical waste cases involving groundwater contamination. It is EPA policy to require (either in a consent judgment or in a court order) a four part remedy. First, those remedies which are known to be applicable and effective, such as capping of contaminated surface soil, are explicitly required in the judgment and must be done by the defendant as quickly as possible. Secondly, to address other problems, such as offsite groundwater contamination, the defendant is required to drill the wells and perform the sampling and analysis (subject to EPA and the State specifications and review) to define the scope of the problem. The defendant then studies several potential remedial actions, including those suggested by EPA and the State. Finally, the defendant implements the remedial measures that EPA believes are necessary in light of the sampling and analytical results. If there is a disagreement between EPA or the State and a defendant, the Court would decide what is necessary under a standard of review EPA and the State believe is favorable. EPA and the State believe that this policy provides the maximum protection to the public in the shortest possible time, with the necessary flexibility.

Because of these inherent problems, it is not practical at this point to specify in the Settlement Agreement which technologies Hooker must implement in two circumstances. First, where Hooker is obligated to conduct surveys to determine the extent of migration from the Hyde Park landfill, if any, in the Overburden and Lockport Bedrock Zone (see pp. I-7, I-9, I-17, I-19), it would be premature to specify what technologies, if any, are required until the surveys are completed and the data therefrom is analyzed. Second, where Hooker is required under the Settlement Agreement to utilize specified technologies, the parties established contingency procedures for defining alternative technologies in the event that the specified technologies do not meet the design or operating effectiveness criteria set out in the Settlement Agreement. (See pp. I-23, I-29-30, I-33, II-8, II-12, V-14-5, V-18, and V-19).

There are practical benefits to the use of dispute resolution mechanisms which must be emphasized. Deferring specifying technology until after sampling has occurred, permits the use

of the most advanced technology accepted for use at that later time rather than when the Settlement Agreement is negotiated. Decisions on what technology is appropriate could be inefficient and erroneous when made without the data that the Settlement Agreement will generate. Finally, decisions on technology made after the Settlement Agreement is approved by the Court will not be subject to the confidentiality requirements of settlement negotiations. [All data and reports submitted by Hooker will be publically available and the public can make whatever comments are deemed appropriate before a final decision on the technology is made.]

It should be noted that terms such as "best available technology" and "best practicable technology" (see Section 301 of the Clean Water Act, 33 U.S.C. §1331), were purposely avoided in order to preclude inappropriate analogies to existing case law. EPA and the State strongly oppose the use of the term "best available technology", as suggested by some of the commentators, because of the prior case law. Even if the words "best available technology" were used, the use of those words would be of little use to the Court or the parties, unless a detailed definition accompanied it, such as the definition in the Settlement Agreement.

(iv) Capping, Landfilling, Incineration

Some of the comments referenced above also specifically stated that the Settlement Agreement required capping, landfilling, and incineration and that those technologies are not the best available technology or Requisite Remedial Technology.

Capping

The Settlement Agreement requires capping at the perimeter of the landfill and either capping or excavation of Bloody Run. (Paragraphs B, G, I and H of Addendum I.) It is asserted by some commentators that capping is not best available technology or Requisite Remedial Technology. With regard to both uses of capping, the Federal and State governments disagree with the comment for the reasons stated below.

slows down only. { The purpose of perimeter capping is to significantly reduce infiltration of water from the landfill surface (thereby reducing the amount of leachate) and to eliminate the possibility of human exposure to chemicals in dust. It is not designed primarily to stop migration of chemicals, although in conjunction with the other remedial measures, it will also aid in that process. The chemicals which are around the perimeter of the surface of the landfill are those which have migrated primarily during the operation

downward migration is likely. Capping reduces infiltration of water through the surface, therefore the downward migration will be slower.

If the chemicals do move downward, they will be picked up by either one of the two overburden tile drain collections systems, the bedrock purge well system, or the Requisite Remedial Technology system which will be designed to contain the chemicals which have already migrated off site.

The Bloody Run capping option has the same general purpose, and is expected to be effective for most of the same reasons described above. The main reason that the Settlement Agreement contains both a capping and excavation option is the concern that excavation of chemical-laden dirt could, if the dust suppression measures specified in the Settlement fail, expose local residents to chemical-laden dust. Obviously, the greater the amount of dust excavated, the greater the opportunity there is for an accidental release of dust. Before any decision is made on the two options, all the information, including the Bloody Run Evaluation will be examined. Clearly, if Bloody Run is capped, there is still a potential for future migration of chemicals. That is why the Settlement Agreement specifically states that if future migration occurs, Hooker still must apply Requisite Remedial Technology to remedy any endangerment. Paragraph P of Addendum II.

Finally, some commentators, Kleppinger comment at 5, College Heights Citizens Association and Letter from K. Kruger referred to the possibility of excavating the entire Hyde Park Landfill and placing the waste and soils in a specially prepared clay vault, as was done at Hooker's Montague, Michigan site. Given the amount of chemical waste (80,000) tons and the additional substantial quantity of chemical-laden soil and rock, it is now technically infeasible to excavate the overburden and bedrock. Even if it were technically feasible, such a proposal must weigh the benefits of removing all the chemicals against the risk of exposure during excavation, transportation, and reburial. At Montague, the toxicity of the chemicals is less, particularly since there is no dioxin, and there was no landfill, but rather chemicals placed in various locations over large areas of the surface. Therefore it was necessary to construct a vault. There are therefore substantial differences between the situations at Hyde Park and Montague. (The least harmful place for the chemicals and chemical-laden soil and rock at this time is underground properly contained and separated from people by containment systems, until it can be properly collected and disposed of pursuant to the Settlement Agreement.)

Incineration

The Settlement Agreement also provides that the spent media, and any other semi-solid or solid residue from the carbon treatment

process or the Barrier Collection systems can be disposed of by any one of three methods: (a) incineration; (b) landfilling in compliance with all applicable federal and state statutes and regulations; or (c) a Requisite Remedial Technology. Paragraph E(3) of Addendum I (p. I-29). Non-aqueous liquids must either be incinerated or treated using a Requisite Remedial Technology. Paragraph E(5) of Addendum I (p. I-30).

It is the position of EPA that

if its an adiabatic facility

[i]ncineration is a relatively well-developed and well-understood technology. Properly executed it can accomplish safe destruction of primarily organic hazardous waste, permanently reducing large volumes of waste materials to non-toxic gaseous emissions and small amounts of ash and other residues. Incineration can often provide an optimum, permanent solution to hazardous waste management with minimal long-term ecological burden. EPA, Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, 45 Fed. Reg. 33154, 33215 (1980), also see 40 C.F.R. §265.343-265.351 (Subpart O); 46 Fed. Reg. 7666 (Jan. 23, 1981); and 40 C.F.R. §§761.10 and 761.40.

The Council on Environmental Quality has stated that incineration, "when properly done, is a proven method of destroying some toxic wastes without posing a threat to the environment." CEQ 11th Annual Report 219 (1980). EPA believes that the incineration specifications of the regulations are regularly achievable because 45 of 54 incinerator test burns reported in the scientific literature met the criteria specified by the regulations, 46 Fed. Reg. 7674. [It should be noted that if Hooker incinerates any of its wastes, it plans to do so at its plant in Niagara Falls and not in the Hyde Park - Bloody Run area.]

The Settlement Agreement's incineration requirements are not an endorsement of or approval of Hooker's incinerator. Below is a brief description of the status of Hooker's incinerator and the present EPA and State position regarding that incinerator.

Hooker Chemical and Plastics Corporation's two residue reactors burn complex chlorinated liquid waste products resulting from Hooker's current production processes. Stack emission testing was conducted in 1978 and 1979 under the supervision of the New York State Department of Environmental Conservation (NYSDEC). The results indicated that adequate destruction efficiency was achieved when the residue reactors were operating at the combustion parameters that were maintained during the test.

In 1979, there was a one-time only burning of non-aqueous leachate from Love Canal in these reactors. In light of the stack testing conducted in 1978, the residue reactors were deemed to be the most environmentally sound destruction system available to meet an emergency situation and special permission was granted by NYSDEC to incinerate this material.

The combustion parameters maintained during the 1978 and 1979 stack emission testing programs have been incorporated into the air quality and solid waste permits issued by NYSDEC. The permits specify maximum feed rates and minimum reactor temperatures and impose stringent conditions for the burning of waste material containing high levels of organic compounds. Hooker must report to NYSDEC on the types and quantities of wastes incinerated. The units are equipped with continuous temperature and capacity monitors. Additional monitors are being installed pursuant to NYSDEC permit conditions.

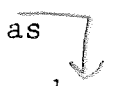
The NYSDEC permits specifically prohibit the burning of PCB's. An authorization from the EPA is required before PCBs can be incinerated (40 C.F.R. §761.10). To receive such an authorization, Hooker must demonstrate that its incinerators are capable of meeting all the requirements of both the PCB and RCRA regulations (see 46 Fed. Reg. 7666 (Jan. 23, 1981)). As yet, no formal request for authorization to incinerate PCB's has been received from Hooker although meetings have been held between EPA, the State, and Hooker to discuss what changes to the incinerator would be necessary to receive such authorization.

EPA has authorized incineration of PCB's in two locations in Texas and in Arkansas. The authorization was granted in these two instances only after detailed monitoring demonstrated that there would be no adverse environmental impact from such incineration. If formal requests for similar authorizations are made in the Niagara Falls area, Hooker must demonstrate through test burns compliance with all environmental regulatory programs (including the requirements of the Settlement Agreement). Before any approval can be made, there must, and will, be careful advance supervision by both EPA and NYSDEC personnel to assure that there will be no adverse impact upon the citizens of Niagara Falls.

Landfilling

Whether Hooker will be allowed to landfill its semi-solid and solid waste will depend upon the application of Federal and State statutes and regulations. A final decision on this matter will depend upon the content of the waste and the conditions at the landfill where such waste is proposed to be sent. Under the

Settlement Agreement Hooker is in no better position regarding the ability to landfill than anyone else in the United States. Given the highly toxic nature of these wastes, particularly the presence of dioxin, landfilling may or may not be appropriate. EPA and the State, of course, cannot prejudge such an application.

If one eliminates capping, landfilling, and incineration as possible methods of containing and cleaning up chemical waste contamination, there are few other applicable demonstrated hazardous waste technologies for the Hyde Park site, although the Requisite Remedial Technology studies will demonstrate whether such technologies exist. Each of the above mentioned technologies is allowed by law. Each clearly has disadvantages as well as advantages. One of the underlying rationales behind EPA's policy of requiring the defendant to perform studies on how to contain and cleanup a site is that this policy is technology-forcing, since it puts an incentive on industry to develop new, improved technologies to remedy these problems. 

21. Comment: Please explain what is meant by Requisite Remedial Technology. Comment of Sister Margeen Hoffman at 157 (February 19, 1981 public hearing).
21. Response: Paragraph 4 of the Hyde Park Settlement Agreement defines the term "Requisite Remedial Technology." Under Paragraph 4(a) the term "Remedial Technology" refers to "engineering"

and construction practices used or accepted for use in landfill containment projects or other industrial projects which are applicable to the materials and hydrogeologic conditions found at the Landfill Site." This definition does not require a technology to be currently in use, but excludes those technologies which are merely theoretical or which are not accepted for use. "Remedial" technologies may include other industrial technologies which are adaptable to conditions at the Hyde Park landfill.

In determining whether a given Remedial Technology should be deemed "Requisite" under particular circumstances, the parties have stipulated in Paragraph 4(b) that the following factors are to be considered:

- (1) the nature of the endangerment to human health and the environment;
- (2) the extent to which application of the remedial technology would reduce such endangerment or otherwise benefit human health or the environment; and
- (3) the economic cost required to apply the remedial technology.

Under the Settlement Agreement, Hooker is obligated to initiate a study concerning whether and to what extent the application of Requisite Remedial Technology is required in one of the two aforementioned circumstances, i.e., the results of offsite surveys or the failure of a specified technology to meet the Settlement Agreement's design or operating effectiveness criteria. Paragraph C(8) of the Addendum I specifies the extensive data which must be included when such a study is submitted to EPA and the State. In Paragraph C(9) of Addendum I, procedures and time schedules are set out for the parties to resolve among themselves any disputes which they may have concerning Requisite Remedial Technology. If the parties are unable to resolve any disputes in this regard, the matter may be brought to the Court for resolution under the standards and considerations described in Paragraph 4(c) of the Settlement Agreement.

Paragraph 4(c) provides as follows:

- (c) Hooker shall be required to apply the Requisite Remedial Technology proposed by EPA/State in accordance with the terms and conditions of this Judgment, unless, upon the evidence, the Court determines:

- (i) that application of such technology is unnecessary to satisfy the goal described in subparagraph (a); or
- (ii) that, considering the factors described in subparagraphs (a) and (b), it would be arbitrary and capricious to require Hooker to bear the economic costs incurred in applying such technology.

No specific examples of Requisite Remedial Technologies can now be delineated. If they could, they would be required in the Settlement Agreement.

22. Comment: The dispute resolution mechanism in the Settlement Agreement does not provide for public notice, hearings, and local input regarding clean up operations. Letter from E. Giroux, representing United Steel Workers at V (March 5, 1981).

22. Response: That statement is only partially correct. The dispute resolution mechanism in the Settlement is not a rulemaking proceeding. It is adjudicatory in nature. If there is a dispute, the parties will litigate the matter in open court, i.e., there will be notice and a hearing. Since EPA and the State plan to make publically available all data and reports from Hooker as they are received, the public will be notified of what is being proposed and can comment on any proposed Requisite Remedial Technology.

(e) Public Information and Involvement

23. Comment: The settlement was reached behind closed doors without public participation. Letter from Councilpersons Joan Gipp and William Heinz at 2 (February 9, 1981); Letter from Alvin Ogg at 4 (February 21, 1981); Letter from Fred Armagost at 2 (January 28, 1981); Letter from G. Martin at 2 (February 23, 1981).

23. Response: All settlement negotiations are held in private. Such privacy is required by the very nature of a settlement. In a settlement the defendant agrees to do what the plaintiff wants done without admitting liability. Statements made during negotiations, if made in public, could severely prejudice the party's legal rights. The Federal Rules of Evidence for

that reason, preclude the admission of statements made during negotiation. Additionally, if negotiations were held in public, the parties would not communicate freely.

Dissemination to the public of the substance of the negotiations by any participant could lead to the violation of the American Bar Association Code of Professional Responsibility, DR-7-107(G): a "lawyer ... associated with a civil action shall not during litigation make or participate in making an extrajudicial statement, other than a quotation from or reference to public records, that a reasonable person would expect to be disseminated by means of public communication and that related to ... evidence ... [t]he performance of any examination or tests ... [or any] other matter reasonably likely to interfere with a fair trial of the action."

There has always been a deep public concern in public health environmental cases about any procedure which would in fact or would appear to exclude the public. There is an inherent public interest in such cases. [That is why the Department of Justice has promulgated a regulation which requires a 30 day public comment period before any environmental settlement is made final by the court. Each comment submitted to the Department of Justice has been answered and the comment and these responses are before the court.]

Because of the extraordinary public interest in this case, the court held a hearing on February 10, 1981 to explain the requirements of the Settlement Agreement. Although 28 CFR, §50.7 does not provide specifically for a public hearing, the Federal Government, again in recognition of the extraordinary public interest in this case, held a hearing pursuant to 28 CFR, Section 50.7, on Thursday, February 19, 1981, at 7:00 p.m., at Niagara University. A transcript of that hearing is part of the public comment process. On February 7, 1981, representatives of the State of New York participated in a public meeting held by the Town of Lewiston regarding the settlement.

[The Court has indicated it will consider all of the public comments, the responses, and the February 10, 1981 hearing record in evaluating the Settlement Agreement. The Federal Government believes that the 28 CFR 50.7 process, particularly in this case, is a vital mechanism for public participation.]

24. Comment: The public should be fully informed concerning all the proposed clean up steps and should obtain access to all testing and monitoring data. Affidavit of Stanley Grossman, representing several residents (February 9, 1981), paragraphs 24-27; Comments of Sierra Club et al. at 2 paragraph 2; Letter from Councilman William Heinz at 6 (February 19, 1981); Comment

of Councilman William Heinz at 10 (February 19, 1981 public hearing).

24. Response: The Federal and State governments agree. As a matter of policy, EPA and the State plan to make publically available all data, other information, and reports which are generated. Paragraph 20 of the Settlement Agreement specifically states that "[a]ll information and documents submitted by Hooker to EPA/State pursuant to this Judgment shall be subject to public inspection" All data and reports received as a result of the Settlement Agreement therefore will be made publically available as received.

The only statutory limitations on what can be made publically available are the exemptions concerning trade secrets and confidentiality required by the Freedom of Information Act (FOIA), 5 U.S.C. §552 and appropriate State law. These exceptions, however, are limited and cannot be used to prevent the public from having the opportunity to obtain raw data, or reports based on the data. See Paragraph (8) of Addendum I for a list of some of the information in the reports. The results of the soil and water sampling, well logs, etc. cannot be considered trade secrets or otherwise confidential.

The Settlement Agreement specifically requires Hooker, EPA, and the State each to designate a Hyde Park - Bloody Run Area Program Coordinator (Program Coordinator) and an alternate. Paragraph 13. The purpose of such Program Coordinator, among other things, is to receive "all monitoring reports and all other relevant information concerning Hooker's performance of the terms and conditions of this Judgment ..." Paragraph 13.

The EPA and State program coordinators will also ensure that data, information, and reports are available for public inspection as quickly as possible after receipt. Although the Settlement Agreement requires Hooker to provide office space at the landfill site for the EPA and State Coordinators, EPA believes that because of the construction, it would be more convenient for the public to have another office. Until other arrangements can be made, EPA will have the above information available at our Love Canal field office at Colvin Boulevard, Niagara Falls. In addition to the EPA office (and the State DEC offices), EPA will offer to provide the Towns of Lewiston and Niagara with copies of the documents produced under the terms of the Settlement Agreement so that the public may inspect them. Of course copies of any documents may be obtained under FOIA regulations. (This can be done at the EPA field office, EPA's Region II office, or EPA Headquarters in

Washington, D.C., either in person or by mail.)

The personnel at the EPA field office will also attempt to explain the information that is available. Schedules of upcoming remedial actions will also be available. Finally, official inquiries can be received at EPA's field office.

EPA and the State have already made publically available all past data, except confidential medical information, which relates to the Hyde Park landfill. EPA and the State released the results of its chemical analyses of the water in the private wells along Bloody Run as they became available and on February 25, 1981, the National Institute for Occupational Safety and Health released its Health Hazard Evaluation Report concerning the people living and working near the Hyde Park landfill, Niagara County, New York (79-022-789).

Finally, the Resource Conservation and Recovery Act specifically requires "[p]ublic participation in ... implementation, and enforcement of any regulation, guideline, information, or program under th[e] Act ... [EPA and the States must] provid[e] for, encourag[e] and assis[t] such public participation.]" Section 7004(b) of RCRA, 42 U.S.C. §6974(b); also see 40 C.F.R. Part 123 and EPA, Interim Final Rule, State Hazardous Waste Programs; Requirements for Public Participation in the State Enforcement Process During Interim Authorizations; 46 Fed. Reg. 5616 (Jan. 19, 1981). In fact, most of the statutes which Hooker must comply with in conjunction with the Settlement Agreement have public participation requirements. See 40 C.F.R. Parts 25 and 123.

25. Comment: Some commentators requested EPA and the State to make publically available the full range of technical data upon which the governments' decisions were made. Letter from Citizens Alliance in February 19, 1981 submissions and at 105 (February 19, 1981 public hearing); Comment of Barbara Morrison at 169 (February 19, 1981 public hearing); Comments of Citizens Alliance at 3; Comments of College Heights Property Owners at 2.

25. Response: All past technical data is now publically available. The State has already released it to individuals who have requested the data. The Federal government has not yet received any formal requests for access to the data. A copy of the data will be made available at EPA's Love Canal field office. Because of the confidential nature of negotiations, it has been impossible until the Settlement Agreement was lodged to make this information available to non-parties.

26. Comment: Those exposed to dust from the site have no means of knowing either the quantity or quality of the materials in the air. Letter from G. Martin at 1 (February 23, 1981).

26. Response: Since EPA and the State will release all data as it is received and under Paragraph J of Addendum V, Hooker must monitor the dust level, all people who may be exposed will have the information on when and to what degree they may have been exposed, if at all.
27. Comment: There is no provision for notice and input for those employees who may be affected, particularly those affected by the storm sewer clean up at Grief Brothers. Letter from E. Giroux at V (March 5, 1981); Comment of Mr. Gibson at 50 (February 19, 1981 public hearing).
27. Response: There is no formal requirement in the Settlement Agreement requiring Hooker to notify either employees or Unions. However, Hooker must notify the management of potentially affected plants before remedial construction is begun. Paragraph L(2) of Addendum V. We would expect that management will inform its employees. Regardless of whether management does or not, of course, the Federal and State Program Coordinators would inform union representatives. As with other members of the public, employees may review the data and reports as they come in and make whatever comments they deem appropriate.
28. Comment: The testing of the Hyde Park area is not predicated on the concerns of the residents. These concerns or access to historical information could be obtained by public input and other communications with the residents. Letter from Councilman Alvin Ogg at 8 (February 21, 1981).
28. Response: EPA and the State have met with local residents in the past, particularly before filing of the lawsuit. See Comment of L. Maillet at 137 (February 19, 1981 public hearing). As was stated at the public hearing on February 19, 1981, representatives of EPA and the State examined historical aerial photos of the area to determine historical drainage patterns. EPA and the State will ensure that all information obtained from the public regarding possible locations of chemical wastes in the area will be investigated during the remedial program required by the Settlement Agreement.
29. Comment: The Three Mile Island Presidential Commission had a local housewife as a member of the commission. Why were there no area residents on the negotiating team for the Hyde Park settlement? It was further proposed that the negotiations be re-opened and local residents be included as negotiators or at least advisers. Comment from Ms. Jane Richardson at 56, 59 (February 19, 1981 public hearing).

29. Response: The Three Mile Island Presidential Commission was a Presidential Commission. Its purpose was to recommend changes in the handling of the nuclear regulatory process. In the case of this Settlement Agreement, there was a lawsuit against an identifiable named defendant. It is traditionally not appropriate to have anyone in lawsuit Settlement negotiations unless they are parties or hired by the parties. See the response to Comment 22. In any event, the negotiations cannot be re-opened at will to include local residents. Substantive input by residents is being considered as evidenced by this comment and hearing process. The only practical alternative to this agreement is several years of litigation.
30. Comment: Government funds should be made available to allow citizens to contract for the services of an independent safety monitor. Comments of Sierra Club et al. at 3 paragraph 2.
30. Response: Such a funding mechanism is a matter between the governmental parties and the local citizens groups. It is inappropriate in an agreement between Hooker and the governmental parties.
31. Comment: In the alternative to joining the residents, industries, and their unions as necessary parties, the Court should restructure the proposed consent decree so that it provides a full opportunity for the affected persons to petition the Court at any time with respect to the responsibilities of any parties to the decree. Comments from Citizens Alliance at 5 and at 113-4 (February 19, 1981 public hearing); Citizens Alliance at 7 (March 13, 1981).
31. Response: This comment presupposes that the Court, sua sponte, can restructure the Settlement Agreement. [We believe the Court can approve or disapprove the Settlement Agreement, but cannot order a change without the consent of the parties. The essence of a settlement is that it is a consensual agreement. In order for the Court to order any action, there would have to be a trial. Of course, if the Court believed the Settlement Agreement is not in the public interest, the Court may always inform the parties in what ways the Settlement Agreement (or side agreements) might be altered to permit the Court to approve it.]

Whether affected persons could petition this Court after the Settlement Agreement is approved (even without a restructuring) depends in large part on the interest of the allegedly affected person and the case law.

32. Comment: An environmental impact statement (EIS) should be prepared so that the history of what has gone on in the Hyde Park area will be known. Affidavit of Stanley Grossman, representing residents at paragraph 26-27 (dated February 9, 1981); Comment of Richard Berger at 128 (February 19, 1981 public hearing).
32. Response: Two questions are raised by this comment: (1) As a matter of law must EPA prepare an EIS before entry of the Settlement Agreement and (2) should EPA in this case, given the amount of public interest, prepare a layperson's explanation of the Settlement Agreement and what it does? There is no legal requirement for EPA to prepare an EIS. The Federal Government believes that the 28 C.F.R. 50.7 process (which includes the February 10, 1981 court hearing, the public hearing on February 19th, the responses to public comments, and any further hearings this court may order) provides the type of non-technical explanation called for by Mr. Grossman's comment. It should also be noted that not only are copies of the Settlement Agreement available to the public, but transcripts of the February 10th hearing and the February 19th public meeting are available (in fact 100 copies of the Settlement Agreement and 50 copies of the transcript of the February 10th meeting were handed out to the public on February 19th).

Section 102(2)(c) of the National Environmental Policy Act (NEPA), 42 U.S.C. §4332(2)(c), requires that "all agencies of the Federal Government shall include in every recommendation or report of legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on --

- (i) the environmental impact of the proposed action;
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented;
- (iii) alternatives to the proposed action;
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented."

Prior to making any detailed statement, the

responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by Section 552 of Title 5, and shall accompany the proposal through the existing agency review processes."

Thus, environmental protection becomes a "part of the mandate of every Federal agency and department." Mobil Oil Corp. v. FTC, 430 F.Supp. 855, 868-9 (S.D. N.Y. 1977). NEPA, of course, ... "was not intended to repeal by implication any other statute..." United States v. SCRAP, 412 U.S. 669, 694 (1973), therefore "an agency will not be required to prepare an EIS when doing so would be inconsistent with its mandatory duties under a statute." Mobil Oil Corp. v. FTC, 430 F.Supp. at 869.

There are two general categories of Federal actions which the case law has held are exempt from NEPA: (1) "emergency actions or other situations wherein time is of the essence" and (2) "actions taken by the Environmental Protection Agency." id.

Courts have stated that enforcement actions are not subject to NEPA's EIS requirement. Getty Oil Co. v. Ruckelshaus, 467 F.2d 349, 359 (3d Cir. 1973) ("To require an impact statement at the enforcement stage would do substantial harm to the Congressional purpose of obtaining expeditious compliance ..." with the Clean Air Act). Gifford - Hill & Co., Inc., v. FTC, 523 F.2d 730, 733 n.7 (D.C. Cir. 1975) (per curiam). "We recognize that our holding effectively means that an agency's decision to institute adjudicatory proceedings, and a priori its decisions to institute investigations..., are outside the scope of NEPA... The decision to investigate or to adjudicate does not involve the 'irrevocable commitment of resources' which NEPA insists must follow rather than precede consideration of environmental factors.") and Kilroy v. Quarles, 614 F.2d 225 (9th Cir. 1980) (Exempting the issuance of a permit which included a requirement to establish a landfill to dispose of sludge).

Several other courts have more generally exempted those situations which require by their nature quick action. Cohen v. Price Comm'n, 337 F.Supp. 1236, 1241 (S.D. N.Y. 1972)

(Denying a motion to enjoin certain fare increases authorized by an order from the Price Commission because the Price Commission was "intended to act...with dispatch"); Gulf Oil Corp. v. Simon, 373 F.Supp. 1102 (D.D.C.), aff'd, 502 F.2d 1154 (Em. App. (1974) (Denying a motion to set aside a Federal Energy Office regulation because the statute required regulation to be promulgated within 15 days after passage of the statute).

There is no purer example of an emergency than the filing (and settling) of a lawsuit aimed at remedying an "imminent and substantial endangerment" to the public health and environment. Time is of the essence once there is an endangerment, i.e., there is a risk of harm to people. To delay the remedial measures called for by this Settlement Agreement for the several months it would take to prepare a formal EIS would increase that risk of harm and "could only serve to frustrate the accomplishment of the Act's objectives." Anaconda Co. v. Ruckelshaus, 482 F.2d 1301, 1306 (10th Cir. 1973). If anyone has a substantive critique or disagreement with the Settlement Agreement, the appropriate course of action is to seek comment through the 28 CFR 50.7 process or intervene, not require an EIS.

The Federal government also believes the case law demonstrates that in general EPA is exempt from NEPA, if its procedures provide a functional equivalent. State of Maryland v. Train, 415 F.Supp. 116, 121 (1975) (Issuing an ocean dumping permit); Environmental Defense Fund, Inc. v. EPA, 489 F.2d 1247 (D.C. Cir.) (1973); Appalachian Power Co. v. EPA, 477 F.2d 495 (4th Cir. 1973); State of Wyoming v. Hathaway, 525 F.2d 66, 69 (10th Circuit. 1975); W. Rodgers, Environmental Law 765 (1977). Neither EPA's regulations, nor any statutes requires an EIS.

The motivation and purpose in investigating, filing, and settling this case is the protection of the public health and the environment. Generally, see Anaconda Co. v. Ruchelshaus, 482 F.2d at 1306. (EPA's "sole mission" is to improve the quality of the human environment.) For over one year a wide variety of Federal and State technical experts have either directly participated in the negotiations, been consulted, or reviewed the final Settlement Agreement.

If the question is whether EPA considered the public health and the environment before lodging, the answer can only be a resounding yes. If, however, the question is whether EPA solicited public comments before lodging just as clearly the answer is no. As was explained in detail in the response to prior comments, such public involvement in litigation is limited to persons who have "alleged [by becoming a party] a personal stake in the outcome of the controversy". By its traditional nature and due to the constitutional restrictions on litigation, public involvement (i.e., involvement of those not a party to the lawsuit) cannot occur until the Settlement Agreement is lodged.

The Federal government believes that the very process of investigating the problem, filing suit, negotiating, reviewing, and approving of the Settlement Agreement coupled with the 28 C.F.R. §50.7 process provide a more expeditious mechanism than an EIS.

F. Reliability of Tests

33. Comment: Because Hooker is doing the sampling, there is great concern about the integrity and reliability of the results. The problem is compounded by the lack of sufficient money in the \$1.5 million fund to pay for governmental oversight of the Judgment. Some commentators suggested that an independent monitor was necessary. Letter from Councilman Alvin Ogg at 2 (February 10, 1981); Letter from Councilman Alvin Ogg at 8 (February 21, 1981); Letter from G. Martin at 2 (February 23, 1981); Comment from Citizens Alliance at 6-7 and at 118-9 (February 19, 1981 public hearing). Citizens Alliance at 13; Comments of College Heights Home Owner Association at 4; Letter from K. Kruger (March 13, 1981).
33. Response: As with many Federal consent decrees, the defendant is required to perform a comprehensive survey and monitoring plan. This is not "letting the fox guard the hen house"; there are several practical and legal justifications and there are safeguards which ensure the accuracy of such measurements and in fact make this the most efficient method of proceeding.

First, the party responsible for the problem should bear all the burden of remedying the problems. Neither EPA nor the State have sufficient excess laboratory analysis capability to perform all the tests required by the Settlement Agreement.

Also, if the tests are performed by Hooker or its consultants (under the supervision of EPA and the State), the results may be more easily used in court against Hooker, if that becomes necessary.

EPA and the State cannot and under the Settlement Agreement do not rely upon Hooker or its consultants. First, before any tests are performed, Hooker (or its consultant) must submit detailed plans on how the sample will be taken, the laboratory handling procedures, and analytical techniques for review by EPA and the State. Paragraph 7. For most tests, there are EPA and/or State promulgated approved methods. For many others there are methods published by independent scientific organizations that are virtually universally accepted. EPA will also institute a quality control and assurance program to insure that the test results obtained by Hooker's laboratories are reproducible. See Paragraph 7(a), 9, and 10.

In order to ensure that the entire remedial program including the testing, is performed in accordance with the plans, EPA will have a Program Coordinator and whatever other technical experts are necessary at the site during implementation. EPA will require split samples (i.e., enough soil, liquid or dust is obtained to divide the sample in three, so that EPA and the State, as well as Hooker can analyze the sample). A number of such split samples will be analyzed by EPA and the State to ensure the accuracy of the Hooker results. Since Hooker will not know which samples EPA and the State will analyze, they cannot systematically bias the data. (Also EPA and the State probably will not check the same samples in order to increase the number of samples checked.) The frequency of analysis of split samples will vary depending upon field conditions and the type of sample.

Under Paragraph 10, Hooker must identify all laboratories being used to do tests and physically inspect such laboratories. Consultants' laboratories can be inspected under EPA's and the State's existing statutory authority (the Settlement Agreement cannot legally bind the consultants unless they become parties.)

Another check on the reliability and accuracy of an individual data point is the fact that the chemicals follow the laws of physics and therefore trends will be exhibited. Any ~~unusual or anomalous~~ result can be resampled by EPA and the State (if not Hooker).

It should be noted that it is the responsibility and normal function of both EPA and the State to do this type of sampling. In most Federal hazardous waste consent judgments there are no environmental funds established (as in paragraph 11) because there is no statutory basis for civil penalties under Section 7003 of the Resource Conservation and Recovery Act. In this case although a State administered fund has been set up to pay for, among other things, sampling and testing by the State, the frequency and amount of such testing is not limited by the fund. EPA, which will not use the fund at all, will perform whatever tests are necessary. The existence of the fund does make the task of monitoring the Judgment easier for the State, but it does not substitute for or limit pre-existing responsibilities of EPA and the State.

The accuracy and reliability of test results are ensured because there are several sanctions available if Hooker should attempt to provide inaccurate or false test results. Hooker could be penalized up to \$5,000 per day if it "unjustifiably fails to comply with the provisions of this Judgment". Paragraph 8(f). Additionally, the court has inherent civil and criminal contempt powers. If Hooker were found to have deliberately falsified information, any party, including the Towns, could seek to have Hooker found in contempt and therefore subject to even larger fines and even potential imprisonment of the individuals involved.

The release provisions of Paragraph 11(c) (i.e., the language which precludes EPA and the State from filing future lawsuits regarding the Hyde Park landfill) are conditioned upon "[c]ompliance with provisions of this Judgment ...". Since providing false information in violation of Federal or State law would not be in compliance with the Judgment, new civil suits for civil penalties could be brought. Also, if it were appropriate, i.e., if Hooker's action met the statutory requirements, EPA or the State could bring a criminal action against Hooker.

The adverse publicity surrounding the determination that Hooker supplied inaccurate or unreliable data is another strong incentive for Hooker not to attempt to do so. Because of all of these factors, EPA believes Hooker's data will be accurate and reliable.

34. Comment: The Court is urged to include in the consent decree a written pledge by the Federal and State governments that they will allocate the full share of fiscal and program resources to carry out governmental responsibilities under the Settlement Agreement. Comment of Citizens Alliance at 8 and 120 (February 19, 1981 public hearing); Citizens Alliance at 14-5.
34. Response: It is inappropriate to include in a Settlement Agreement such a pledge. The governmental parties are statutorily obligated to carry out their responsibilities. The filing of the enforcement actions in this case, the public statements to date, and the responses to these comments indicate that the governmental parties have committed and will continue to commit adequate resources to this problem.
35. Comment: There should be an independent monitor on site during the implementation of the Judgment because as the Judgment currently stands the day to day decisions are largely self-enforcing by Hooker and its contractors. Comments of Sierra Club *et al.* at 4 paragraph 3; Citizens Alliance at 13; Comment of College Heights Property Owners Association at 4.
35. Response: The agreement as it now stands provides for continuous oversight by EPA and the State of Hooker's implementation of the Judgment. Paragraph 13 requires EPA and the State to designate Hyde Park - Bloody Run Program Coordinators. Hooker is required to provide the EPA and the State Coordinators office space at the site. *id.* These coordinators not only will receive and disseminate all data but at least one coordinator will be present during all construction activity. In addition to the Program Coordinators, any appropriate EPA or State personnel may enter Hooker's property to observe construction or inspect logs, etc. See Paragraph 9. Under Paragraph 10, EPA and the State may even inspect Hooker's laboratories.

To the extent that these comments suggest or request that all authority concerning remedial measures be given to an "independent" set of consultants, such a course of action is inappropriate. Congress (and in the case of the State, the Legislature) has delegated responsibility to the appropriate governmental agencies to protect the public health and the environment. Although EPA and the State both in general and in this case have used independent consultants, it would be an improper delegation of governmental authority to place such ultimate decision-making in the hands of consultants.

Since one commentor suggested that Hooker be required to hire "independent consultants to perform the construction," it should be noted that Hooker in fact has hired several independent consulting firms. See the Response to the Court's Order of February 12, 1981. Although Hooker employees will be involved in the construction, the usual practice is for consultants or contractors to do most of the work.

Also see the Response to Comment 33.

G. Questions Relating to the Towns

36. Comment: The town was presented with copies of the already negotiated agreement between the Federal and State governments and Hooker. This agreement does not adequately consider the concerns of the Town residents. Letter from Councilman Alvin Ogg at 1 (February 10, 1981); Letter from Councilman Alvin Ogg at 1 and 14 (February 21, 1981).
36. Response: The Towns were made parties in June 1980. They did not at that time contact anyone to request participation in the negotiations. The Towns received copies of a draft Settlement Agreement in early October 1980 and changes were made in the draft to reflect concerns raised by the towns. The Towns negotiated with Hooker from October 1980 until January of 1981. The Towns obtained additional commitments from Hooker which are reflected in the two side agreements.

It should also be noted that, from October 1980 through January 1981, the Federal and State government offered the Towns whatever assistance was necessary in their review of the Settlement Agreement and their negotiations with Hooker. The Towns, however, did not request any assistance.

37. Comment: The Town Board was requested to sign a confidentiality agreement which was understood to prevent the Town from seeking outside consultants. Letter from Alvin Ogg at 1 (February 10, 1981); Letter from Councilman Alvin Ogg at 1, 9 (February 21, 1981).
37. Response: All parties were required to sign a confidentiality agreement (see copy attached to Mr. Ogg's February 21, 1981 letter) before entering the negotiations. The confidentiality agreement, however, on its face does not preclude hiring consultants and even contemplates it. The agreement refers to

... party, (which the parties understand to include, of necessity ... consultants ...)

and specifically states that information received

shall not be released, disclosed or discussed by the recipient party in any manner whatsoever with any person other than those persons who have need for documents or information as part of their ... consultant responsibilities ...

Confidentiality Agreement pp. 1 and 2.

The Towns were represented by attorneys. In fact the Town of Lewiston was

represented not only by the regular Town Attorney but an attorney hired by their insurance company.

38. Comment: The agreement does not address the costs that might be imposed on the Town to verify testing and oversee implementing the Consent Judgment. These costs could be substantial. Letter from Councilman Alvin Ogg at 2 (February 10, 1981); Letter from Alvin Ogg at 9 (February 21, 1981); Letter from G. Martin at 1-2 (February 23, 1981).
38. Response: The Settlement agreement does not impose upon the Towns any obligations to verify testing or oversee implementation of the Settlement Agreement. If the Towns wish to do so, it is their obligation to determine the best method to finance this undertaking.
39. Comment: The agreement does not specify the extent of the possible indebtedness to local taxpayers, particularly from the cost of overseeing the implementation of the Consent Judgment. Letter from G. Martin at 1 (February 23, 1981).
39. Response: The Town of Lewiston in its side agreement did obtain commitments from Hooker concerning the loss of revenues from sewer use fees. Also see the Response to Comment 38.
40. Comment: The Department of Justice, at Hooker's request and without consultation with the Town, named the Town of Lewiston as a defendant to prevent Hooker from incurring extra obligations and to allow Hooker free access to residents' land using the Town's power of eminent domain. Letter from Councilpersons Joan Gipp and William Heinz at 2 (February 9, 1981); Letter from Fred Armagost at 2 (January 28, 1981); Comment of Councilwoman Joan Gipp, Town of Lewiston (both in writing and at February 19, 1981 public hearing); Comment of Stanley Grossman at 68-9 (February 19, 1981 public hearing).
40. Response: Hooker moved to have the Towns of Lewiston and Niagara and the State of New York joined as necessary parties, i.e., complete relief could not be granted without them. The Federal government took no position on this motion. As indicated in Paragraph 3(a) of the Settlement Agreement, on June 11, 1980, the Court ordered the Towns and the State joined as defendants (the only way they could initially be joined).

The State was realigned as a plaintiff, pursuant to its motion, on September 11, 1980. The Towns never made any motion to realign and therefore remained as defendants. Their position as a necessary party may have been predicated on their authority to issue and deny permits. [As this Court stated, "it may well be useful to have the towns present so that they may protect their interests both as landowners and as governmental municipalities." Order of June 11, 1980 at 7.

As indicated in the Response to Court's Order of February 12, 1981, EPA and the State believe that although not explicitly addressed by the Settlement Agreement, Hooker should reimburse the condemnor in any eminent domain proceeding for reasonable compensation paid to a condemnee for any such condemnation. Hooker in the Response to the Court's Order of February 12, 1981, at 13, stated that "Hooker believes that the question should be addressed on a case-by-case basis in light of extant circumstances."

41. Comment: The Federal government first promised to have a public meeting in the Hyde Park area before the February 10th judicial hearing and then withdrew its commitment. Letter from Councilman Alvin Ogg at 2-4 (February 21, 1981).
41. Response: Although this comment is not relevant to the merits of the Settlement Agreement, the record should be made clear. The Federal government has never before held a public meeting under the 28 C.F.R. §50.7 process. The decision to hold such a hearing was a policy decision that necessitated review at high levels. Numerous procedures and details, such as who would be there, where it would be, and whether a transcript would be made, needed to be worked out. Additionally, there was concern about the propriety of holding such a public hearing prior to the February 10, 1981 court hearing and the ability to prepare for both a Court hearing and a public hearing.

There were many contacts between staff level attorneys and representatives of the Towns concerning the public meeting. Almost immediately the decision to have a public meeting was made. However, there continued to be a question of what was the appropriate timing of such a meeting. The representatives of the Town may have been given the impression that a decision had been made. Although this confusion clearly should have been avoided, it reflects only the Federal government's desire to provide the public with the most effective presentation possible, yet avoid the appearance of usurping or interfering with the judicial process.

42. Comment: Will EPA or DEC advise the Town of Lewiston in writing what land use would be acceptable in the vicinity after the remedial work is completed. Councilwoman Joan Gipp (both in writing and at February 19, 1981 public hearing).
42. Response: If the Town of Lewiston requests in writing EPA's or DEC's advice, we will provide a response in writing.

Other Comments

43. Comment: If under Addendum V of the Judgment the air measurements show a level above background will there be a time lag between testing or sampling, the obtaining of test results, and actual removal of residents? Comments of Barbara Morrison at 178 (February 19, 1981 public hearing).
43. Response: The provisions of Addendum V, Paragraph J make the time lag between detection of dangerous particulate levels and relocation of residents, if necessary, as short as is humanly and technically possible. The dust level is monitored continuously. The monitoring and sampling for chemical particulates are ones which can be carried out quickly and accurately --- in a matter of 24-48 hours. If there is potential danger to residents in the area, the construction activity which is generating the activity is temporarily shut down immediately under the Settlement Agreement. The only step between shut down and relocation is a survey of homes potentially affected, which would be carried out immediately pursuant to Paragraph J(5)(c).

44. Comment: It is claimed that Addendum II at II-2 of the Consent Judgment severely limits the circumstances under which Hooker would guarantee the effectiveness of the Bloody Run Remedial program. It is claimed that the section, which provides that if Hooker's remedial actions undertaken according to the terms of the consent decree are not effective in stopping the migration of chemical contaminants from Hyde Park landfill into Bloody Run area, only in very specific circumstances requiring an almost unattainable governmental burden of proof, would Hooker be required to continue work on the problem. Comments of Citizens Alliance at 9 and 121 (February 19, 1981 public hearing).
44. Response: In the event that the Bloody Run remedial action has not been successful in completely stopping the contamination of groundwater in the area, Paragraph P of Addendum I provides that the government may petition the Court to require Hooker to undertake a study of and implement Requisite Remedial Technology to address the problem. We would have to show that the continuing migration of chemicals violated Federal or State law; e.g., that it may present an imminent and substantial endangerment. If there is no such endangerment (i.e., risk of harm) there is no reason to take action. If such endangerment does exist, we will be able to demonstrate this to the court through the data obtained under the monitoring program. It is inaccurate to characterize our burden of proof as "almost unattainable." In fact, absent the approval of this Settlement Agreement, it is the burden that the government would have had if this case had been litigated. Finally, the standard in this situation is de novo because the governmental parties have specified a remedy, capping, which may result in further migration. See also the response to Comment 47.
45. Comment: The already capped landfill should not be reopened to place more materials in it. The residents and workers of the area have already been exposed to the capped materials once. Letter from Councilman William Heinz at 6 (February 18, 1981); Letter from C. Shonnard at 1 (February 24, 1981); Comment of Councilman William Heinz at 101-2 (February 19, 1981 public hearing).
45. Response: Paragraph K of Addendum I provides that wherever possible excavated materials will be disposed of at the "toe" of the landfill site and subsequently capped. Disposal at

the toe does not require reopening. The landfill will only be reopened if necessary and, in any event, only in a specifically designated area. Any reopened area will, of course, be capped. There is no practical alternative available and this strategy is consistent with the desire of the Towns not to merely spread the problems of Hyde Park to other locations in the area. Also unlike the situation when the landfill was in operation, there will be a stringent health and safety plan in effect if the landfill is reopened to minimize risk of exposure.

46. Comment: Instead of collecting contaminated waters haphazardly, a water filtration system could be built. Also a tunnel from north to south along Hyde Park Boulevard at the approximately 120 foot level could be installed. This would drain the whole area. Letter from Fred Armagost at 1 (January 29, 1981).

46. Response: Contaminated water will not be collected haphazardly. The barrier collection systems described in Paragraph D of Addendum I will be designed to collect as much contaminated groundwater as possible using Requisite Remedial Technology and will take into account where contamination has been observed through surveying and monitoring. This collected water is then to be given appropriate treatment, pursuant to Paragraph E of Addendum I.

A tunnel 120 feet into the ground would not be a practical remedial alternative. Tile drainage trenches 15 feet from the top of the bedrock, however, are among the alternatives to be considered in the Requisite Remedial Technology study.

47. Comment: All of the 80,000 tons of chemicals in the Hyde Park landfill should be destroyed by high temperature incineration at the site. Letter from Fred Armagost at 1 (January 28, 1981).

47. Response: Digging up the entire landfill would be highly impractical and might cause more problems than it would solve because of the possible re-exposure of the people to this massive quantity of waste. Moreover, it would be impossible to separate the waste from the massive quantity of earth in which it is buried and therefore incineration would not be accomplished effectively. Incineration is appropriate for the highly concentrated spent media, semi-solid and solid waste and non-aqueous phase liquids to which it may be applied pursuant to Paragraphs E(3)(6) and (7) of Addendum I. See the response to comment 20.

48. Comment: It has been questioned whether or not a purge well system in the deep aquifer can work effectively. If such a system is put into place, it should be thoroughly reviewed prior to its use and a system should be installed to determine whether it has worked once it is installed. Comments of Sierra Club et al. at 5 paragraph 6.
48. Response: The Settlement Agreement provides, in Addendum I, Paragraph D(4), that purge wells are to be used only after Hooker has demonstrated to the governments' satisfaction that they will be effective at the depth at which they are to operate. Furthermore, the Agreement provides at Paragraphs H-J of Addendum II that Hooker will monitor the effectiveness of whatever leachate collection system is installed. If the system is not working effectively, Hooker must do whatever is necessary to achieve effective leachate collection. Finally, if purge wells do not work, Hooker must determine and install whatever Requisite Remedial Technology, if any, that would be effective (Paragraph J of Addendum II).
49. Comment: Some commentors referred to specific areas which may be contaminated with chemicals. Comment of Mr. Martelli at 51-2 (February 19, 1981 public hearing); Comment of Mr. Bracewell at 79 (February 19, 1981 public hearing); Comment of Mr. Maillet at 130-139 (February 19, 1981 public hearing).
49. Response: Addendum I provides for an extensive and systematic search for contamination in the soil and groundwater surrounding the landfill. If there is contamination in the areas referred to by the commentors it will be found and dealt with appropriately. Additionally, EPA and the State will ensure that any information concerning specific areas which may be contaminated will be investigated during the survey initiated under the Settlement Agreement.
50. Comment: All excavation, pumping and/or treatment sites must be completely enclosed to ensure that the toxics are properly contained. Letter from G. Martin at 1 (February 23, 1981).
50. Response: It is not necessary to completely enclose the site during construction to properly contain the chemicals. The lagoons now have temporary covers and the Settlement Agreement provides for the use of bulk containers. Paragraph E of Addendum I. The carbon treatment facility is at the Hooker plant in Niagara Falls and is enclosed. The major concern about airborne contamination comes from the escape of dust during construction activities involving the excavation of potentially chemical-laden soil. Paragraph J of Addendum V deals with this problem at great length and requires measures to prevent dust dispersion. If the measures taken by Hooker

are not adequate, they must, as per Paragraph J(d), perform a study of alternative methods including a movable enclosure (weather structure), and implement the "requisite remedial technology."

51. Comment: Recently proposed EPA guidelines for incineration call for an extremely efficient system, but the agreement itself does not appear to provide for effective monitoring to determine how efficiently the incineration system will work. Comments of Sierra Club et al. at 5 paragraph 5.
51. Response: The Settlement Agreement at Addendum I, Paragraph E(3) provides for incineration of spent media and residue from treatment processes. Paragraph E(6) sets out detailed and stringent operating and monitoring criteria for this incineration. The monitoring requirements, including daily monitoring of the destruction efficiency of 99.99%, are consistent with the EPA incinerator regulations. See the response to comment 20. In any event, Hooker must, pursuant to Paragraph E(6)(f) of Addendum I, meet all Federal and State regulations. If Hooker does not satisfy the operating criteria, incineration activity will be immediately shut down until corrective measures are taken (Paragraph E(7)).
52. Comment: A high velocity water system (such as will be used to clean the Gorge Face) may create massive air pollution. A stringent health and safety plan should be put into effect prior to its use. Comment of Sierra Club et al. at 6 paragraph 7; Letter from C. Shonnard at 2 (February 24, 1981).
52. Response: As set out in Addendum I, Paragraph I(1), the water jet to be used in cleaning the Gorge face is to be "covered by a portable enclosure which is designed to minimize airborne dispersion." Prior to its use a detailed health and safety plan will be submitted to EPA and the State for review. The use of the jet will not occur unless EPA and the State believe the plan is adequate or the Court orders its use. To the extent that workers need to be inside this enclosure, the "Confined Space Activity" provisions of the Health and Safety Plan at Addendum V, Paragraph H would apply. Therefore such workers will have impervious clothing and an artificial air supply.
53. Comment: The frequency of sampling for the activated carbon waste treatment system, Addendum I at 27, is inadequate. Letter from Councilman Alvin Ogg at 8 (February 21, 1981).

hearing); Letter from E. Giroux, representing the United Steel Workers at III (March 5, 1981); Comment of Stanley Grossman at 67 (February 19, 1981 public hearing); Councilman William Heinz at 98-99 (February 19, 1981 public hearing); Citizens Alliance at 12-13; Comments of College Heights Property Owners Association at 5; Letter of J. Hale (March 18, 1981).

55. Response: Hooker's liability is not automatically terminated after 35 years. Paragraph F of Addendum III provides that the operation and maintenance activities undertaken pursuant to the Settlement Agreement shall continue for a period of 35 years. The only exception concerns operation of the barrier-collection systems, or components thereof, where the period may be shortened if Hooker satisfies certain specified criteria. Paragraph G provides for an extension of the Maintenance Program beyond 35 years where EPA/State establishes to the Court that the extension is necessary to effectuate the purposes and goals of the Judgment, i.e., to protect against endangerment to human health and the environment.

The selection of a 35-year expiration date for this Settlement Agreement is consistent with, but more stringent than, existing statutes and regulations. The regulations issued by the Environmental Protection Agency pursuant to the Resource Conservation and Recovery Act of 1976 (RCRA) require that owners and operators of certain hazardous waste treatment storage and disposal facilities provide post-closure care for 30 years. (40 C.F.R. §265.117). Under Section 107(k)(1) of the Superfund Act, the liability of all hazardous waste disposal facilities covered by a Subtitle C RCRA permit "shall be transferred to and assumed by" a specially created Post-Closure Liability Fund, if the owner or operator has complied with RCRA Subtitle C closure requirements. The Congress has in fact decided that taxes obtained from the chemical industry as a whole should pay for perpetual care of hazardous waste sites.

Although the landfill itself will, of course, exist at the end of 35 years, the remedial action and monitoring activities will ensure that there will be no endangerment to human health and the environment. If monitoring, which must continue for three years after termination of liquid collection activities, shows that chemicals are still migrating from the landfill site and thus causing an endangerment to human health and the environment, EPA and the State would invoke the provisions of Paragraph G to obtain an extension. In effect, therefore, maintenance of the landfill site by Hooker will continue as long as necessary to protect against endangerment to human health and the environment.

In sum, the parties believe that the 35-year maintenance period is an appropriate one, but to ensure adequate protection of health and the environment, the Settlement Agreement has provided sufficient flexibility to extend the program if necessary to accomplish that goal.

56. Comment: The parties have agreed to acceptable soil survey levels and effluent discharge treatment levels that would appear to be inconsistent with the government's proper regard for the protection of the public health and welfare. This position is true because in the Federal complaint it is stated that there is no safe level for some of these chemicals. Comments from Citizens Alliance at 5-6 and at 116-7 (February 19, 1981 public hearing).

56. Response: The soil survey levels are based on the detection limits for these chemicals in soils. See the response to comment 79. As far as the effluent discharge levels in Paragraph E(2)(a) of Addendum I are concerned, these represent levels which will be discharged to the Niagara River and reflect a very stringent level of treatment commensurate with the toxic nature of the substances at issue. In any event, pursuant to Paragraph E(2)(a) Hooker's discharge of treated leachate must always be consistent with Federal and State law and permits to the same degree required of any party seeking to discharge pollutants to waters of the United States. Also see the response to comment 79.

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57. Comment: The final disposal of spoils, sludges, etc. is to be decided at a later date under the Judgment. It should be specified in the Judgment. Comments of Sierra Club et al. at 4-5 paragraph 5.

57. Response: Paragraph E(3) of the Settlement Agreement provides three alternatives for the disposal of spent media and residue from waste treatment: incineration, disposal in a secure landfill, or a performance equivalent using Requisite Remedial Technology. See the response to comment 20. In all these cases, EPA and the State must first approve the details before the technology can be implemented. The advantages of giving Hooker alternatives in this manner are two-fold. First, it is beneficial to have both landfilling and incineration in the event one of these methods becomes temporarily impossible

to use, or, if one of the methods proves superior for a particular type of waste. Secondly, allowing use of a performance equivalent gives flexibility to apply the most advanced technology possible. Nothing is gained by requiring a specific method now and therefore being locked into it for the life of the Settlement Agreement. New technology will undoubtedly arise in the next 35 years and we need to be flexible in order to take advantage of it. Finally, settlement negotiations cannot and should not substitute for the permitting process. Hooker must submit a permit application and based upon the information in that application, the ultimate decisions on disposal will be made.

58. Comment: Certain aqueous phase liquids could have a significant impact if they pass through the Niagara Falls Wastewater Treatment Plant. The Judgment should not allow effluent discharged into the municipal sewer system to pass through the Wastewater Treatment System untreated. Comments of Sierra Club et al. at 5 paragraph 5; Letter from Fred Armagost at 1-2 (January 28, 1981).
58. Response: The Settlement Agreement does not allow aqueous phase liquid to pass through the Niagara Falls Wastewater Treatment Plant untreated. In Paragraph E(1)(a) and (b) it is provided that Hooker must demonstrate that chemicals will not pass through the Niagara Falls Municipal Waste Water Treatment Plant before they can obtain permission to discharge directly to the municipal plant. This provision is consistent with the Federal Pretreatment Regulations at 40 C.F.R. Part 403.5 pursuant to the Clean Water Act, 33 U.S.C. §1317.
59. Comment: The action limits in the Judgment are based on OSHA and EPA standards. Because these limits are based on considerations of economics and the OSHA limits are based on 8-hour exposures, there is no protection for the families in the area. Letter from Councilpersons Joan Gipp and William Heinz at 2 (February 9, 1981); Comments of Ecumenical Task Force at 8.
59. Response: The levels required in the Settlement Agreement are not the same as or derived from OSHA or EPA limits. The Settlement Agreement does incorporate by reference the requirements of the Occupational Safety and Health Act (OSHA), 29 C.F.R. Part 1910. Paragraph A(2) of Addendum V. The Settlement Agreement contains additional requirements and the Safety Officer may further supplement the Safety Plan.

One commentor specifically claimed that the "monitoring levels set for benzene and TCE are not protective of human health, since these levels are effectively higher than the levels of permissible occupational exposure." Comment of Ecumenical Task Force at 8. This statement is incorrect. The Settlement Agreement limits the benzene level in the air to 10 ppm or less. The existing OSHA standard sets a maximum peak level of 50 ppm for benzene (with a ten minute average maximum of 25 ppm and an eight hour average limit of 10 ppm). 29 C.F.R. §1910.1028. It should be noted that the Supreme Court recently invalidated an OSHA benzene regulation that would have lowered the benzene level to what was described as the lowest feasible limit (1 ppm average for an eight hour period and 5 ppm for up to 15 minutes), because there was not sufficient scientific support for the lower level. Industrial Union Dept., AFL-CIO v. American Petroleum Institute, U.S. _____, 48 U.S.L.W. 5022, 5031 (1980). EPA's recently proposed hazardous air pollution regulation limits benzene levels from fugitive emission sources to 200 ppm above background, 46 Fed. Reg. 1165 (Jan. 5, 1981). The 10 ppm limit in the Settlement Agreement is at a minimum twenty times lower.

This same commentor indicated that use of an OSHA standard would be less protective because such standards are based on being exposed only eight hours per day during a five day workweek and the residents would be exposed 24 hours a day, seven days a week during the remedial work. id. at 8. Even if the levels used in the OSHA regulation were used as the monitoring limits in Addendum V during construction, any exposure of the residents and therefore the risk of harm will be substantially lower than any exposure of the workers protected by the OSHA regulations. Under the Settlement Agreement the levels of chemicals will be monitored at the construction site, which will always be several hundred feet away from the nearest occupied home (Hooker's offer to purchase homes substantially increases this distance). Gases diffuse rapidly in open air. The actual concentration level near a resident's home, as opposed to near workers under OSHA regulations, will be extremely low.

Also an OSHA limit used as a monitoring limit would provide more protection to the residents than the workers because the construction activity specified in the Settlement Agreement would take one or two years to complete, not a lifetime, thereby reducing the possibility of exposure.

In general, the Settlement Agreement limits were determined based on EPA's and the State's assessment of the toxicity of the chemical and the detection limits for that chemical which are regularly achievable. See the response to comment 79. Since there are no applicable EPA and State regulations, most of these limits were determined specifically for this Settlement Agreement. These levels are very stringent in an absolute sense and, as indicated above, are more stringent than existing or proposed EPA or OSHA regulations.

60. Comment: The Safety plan is site specific and does not provide for a moving plan. Guidelines should be spelled out before the plan is put into effect to guide field personnel. Comment of Sierra Club et al. at 6 paragraph 8.
60. Response: As stated in Paragraph A of Addendum V the Health and Safety Plan, "is designed, and has as its purpose, to provide extraordinary precautions. . . during the excavation, transportation, disposal and capping of soils and sediments . . ." Clearly then, the plan applies to all on-site personnel whether they be on the landfill site itself or in the surrounding area. By definition under Paragraph B(2), the working site to which the plan applies includes all areas where "special construction activity" is taking place, i.e. excavation, transportation or disposal. As the special construction activity site moves, so do the requirements of the Health and Safety Plan. The more detailed plans and specifications will be submitted before construction begins.
61. Comment: The soil samples need to be analyzed for a non-chlorinated organic surrogate parameter to aid in determining the extent of sub-soil migration. Toluene is recommended. Letter from C. Shonnard at 1 (February 24, 1981).
61. Response: The soils were analyzed for compounds which would remain absorbed to soil particles and not volatilize, as Toluene does. The parameters were chosen as indicators based on EPA, State, and Hooker data which show that the presence of these chemicals correlates well with that of other chemicals from the landfill distant from the site. In this way, MCT and MCB were chosen to represent landfill contamination whereas TCP and HCB were used, for the purpose of the judgment, as surrogates for dioxin contamination.

62. Comment: Some residents requested a thorough test of their home for contamination. Letter from Mr. & Mrs. Marzaika (received March 6, 1981); Response from Mr. & Mrs. Barney (March 5, 1981); Response Form from Ms. T. Rafferty (received on March 6, 1981); Comment of Norman Martelli at 154 (February 19, 1981 public hearing).
62. Response: The State intends to implement a comprehensive program to determine the extent of contamination from airborne migration. The surveys required under the Settlement Agreement will determine whether the soil and groundwater near the home contain chemicals from the landfill.
63. Comment: The Settlement Agreement requires intrusion upon private property and requires homeowners to grant Hooker easements and even temporary relocations without any compensation. Affidavit of Stanley Grossman at paragraph 13-14; Comment of Councilwoman Joan Gipp (in writing and at February 19, 1981 public hearing); Letter from Fred Armagost at 2 (January 28, 1981).
63. Response: Paragraph L of Addendum V requires Hooker to "bear reasonable costs for such [temporary] relocation, including subsistence and lodging." Nothing in the Settlement Agreement requires private individuals to grant easements. Since they are not parties to the Settlement Agreement, it could not bind them, if it did.

The Response to the Court's Order of February 12, 1981 addressed the question of easements and described generally the procedures for obtaining them.

① First, Hooker must use its best efforts to obtain such easements. Best efforts does not mean obtaining the easement without any compensation. Second, if Hooker is unsuccessful, the EPA, the State and the Towns are required to use their "best efforts, consistent with their legal authority (recognizing that as a matter of law [the parties] have the power of eminent domain)" to assist Hooker in obtaining such easements.

All of the governmental parties to the Settlement Agreement have the power of eminent domain. While it is not now possible to predict with certainty whether and under what particular circumstances eminent domain might be used, it is helpful to delineate briefly the general procedures followed

when the power of eminent domain is invoked. Rule 71A of the Federal rules of Civil Procedure sets forth the federal district court procedures governing the condemnation of property. The New York Eminent Domain Procedure Law (EDPL) (McKinney 1979) sets forth the procedural requirements for the state governmental parties' use of eminent domain. Under the EDPL, prior to a condemnation, the condemnor is required to hold a public hearing to present and explore the nature and scope of an acquisition proposed in connection with a public project. EDPL §§201-203.

Thereafter, the condemnor shall make a determination concerning such acquisition. Any person aggrieved by this determination may seek judicial review by the appellate division of the Supreme Court in the judicial department embracing the county wherein the proposed acquisition is located. EDPL §207.

Claims concerning compensation for property acquired by eminent domain are within the exclusive jurisdiction of the New York State Court of Claims where the State is the condemnor, and, if one of the Towns is condemnor, within the jurisdiction of the Supreme Court in the judicial district where the property is located. Thus, unless the condemnor is the United States, the only appropriate forum for condemnation proceedings is a New York State court. Also see the Response to Comment 40.

64. Comment: "It was ... mentioned at the February 10th hearing before the Court that if any material was found that could not be landfilled or incinerated, it would be left there. What good would this Judgment be if hazardous materials were just left there." Letter from Councilman William Heinz at 7 (February 18, 1981); Councilman William Heinz at 102 (February 19, 1981 public hearing.)
64. Response: Hazardous materials will never "just be left there." The Settlement Agreement contemplates incineration, treatment, or landfilling of all hazardous materials removed from the ground. Nevertheless, there may be instances where landfill facilities meeting the agreement's stringent standards are not temporarily not available, incineration is not achieving the required 99.99% removal, or a necessary permit has not been issued. It may then be necessary to temporarily leave wastes in the ground until proper disposal can occur.

Paragraph E(8) of Addendum I. There would, of course, be stringent monitoring and maintenance measures during such a time. The approach will avoid merely spreading environmental problems from one location to another. In the short term, the safest place for this waste, if no treatment or storage facility is available, is beneath the surface of the ground.

65. Comment: The proposed agreement limits the penalty for failing to comply with the Consent Judgment to an eight year period Paragraph 8(f). Letter from E. Giroux, representing United Steelworkers, at III (March 5, 1981).

65. Response: The stipulated penalty of up to \$5,000, provided for in paragraph 8(f) of the Settlement Agreement, is indeed effective only for an eight year period. The intent of the stipulated penalty is to encourage Hooker to complete construction of containment, monitoring and maintenance facilities in a timely manner. The stipulated penalty removes any economic incentive to delay such construction. Eight years after the effective date of judgment, the construction phase of the remedial program will probably have terminated and stipulated penalties will no longer be useful. After eight years the Federal and State governments can seek civil and criminal contempt penalties to enforce the Settlement Agreement, if necessary.

66. Comment: It is only Hooker, the Federal government and the State government that are parties as such, to this action. Comment of Stanley Grossman at 68 (February 19, 1981 public hearing).

66. Response: Hooker, the Federal and State governments are not the only parties to this action. The Towns of Lewiston and Niagara are parties as well. As parties, both the Towns have the right to enforce the Settlement agreement through the contempt powers of the Court.

67. Comment: The synergistic effects of the mixture of waste materials in the landfill or leachate were not addressed in the agreement. Letter from Councilman Alvin Ogg at 8 (February 21, 1981); Comment of Ecumenical Task Force at 9-10.

67. Response: In setting all of the limits in the Settlement Agreement, the toxicity of the chemicals, including possible synergistic effects, was considered. There is, however, no established method of calculating such effects. Taking the synergistic effects into account is largely a subjective matter,

e.g., the Water Quality Criteria document states that "the criteria published today are based solely on the effect of a single pollutant. However, pollutants in combination may have different effects because of synergistic, additive, or antagonistic properties. It is impossible in these documents to quantify the combined effects of these pollutants..." 45 Fed. Reg. at 79319. Taking into account synergistic effects, therefore, is essentially a matter of professional judgment. However, as explained in the response to comment 79, the fundamental factor in deciding the limits for this Settlement Agreement was the detection limit for each chemical.

68. Comment: Various commentators have stated that the negotiations took three or four years. Letter from G. Martin (February 23, 1981); Comment of Stanley Nogash at 103 (February 19, 1981 public hearing).

68. Response: The federal complaint was filed in December of 1979 and negotiations commenced shortly thereafter. The Settlement Agreement was lodged on January 19, 1981.

69. Comment: The sediments of Bloody Run Creek contain the greatest concentrations of isomers of dioxin ever found. Also, the soil, homes, and people in the area have dioxin in them. Affidavit of Stanley Grossman at paragraph 9(a); Comments of Richard Berger at 125-6 (February 19, 1981 public hearing).

69. Response: The sediment of Bloody Run contains serious dioxin contamination, although it is not the most serious ever found. The remedial program in Addendum I (pages 25-48) thoroughly deals with this contamination. Part of this program is to determine the exact extent of the contamination so that capping or excavation can be carried out effectively. There is no evidence that the soil and homes in the area, "including the people living there," are contaminated. See the response to comments 1 and 11.

70. Comment: The judgment does not classify human health as its first priority. Comment of Councilwoman Joan Gipp at 2 (both in writing and at February 19, 1981 public hearing).

70. Response: Paragraph 4(a) of the Settlement Agreement clearly states that the, "... programs described in this Judgment have been designed, and have as a goal, to protect against endanger-

ment to human health..." As stated in paragraphs 4(b), (c), and (d), endangerment to human health is a significant factor in any decision as to what constitutes the requisite remedial technology to apply to the Hyde Park Landfill. See also Paragraphs A(1) and A(3) of Addendum V.

71. Comment: Was ambient air testing in the basement or any other areas inside the homes performed in the past? Comment of Barbara Morrison at 173 (February 19, 1981 public hearing).

71. Response: No such testing has been performed by EPA, the State, or Hooker in the past. The groundwater survey specified in Paragraph C of Addendum I will determine whether chemical-laden groundwater has entered the basements and created an air pollution problem.

72. Comment: If the Court does not consider relocation appropriate, the Court should join the residents, the industries, and unions as necessary parties to this lawsuit. Citizens Alliance at 4 and at 112-3 (February 19, 1981 public hearing); Comment of Citizens Alliance at 1-2.

72. Response: The normal procedure in litigation is for a party and not the Court, sua sponte, to join additional parties. The Federal Rules provide that additional parties can be joined if necessary for complete relief. Rule 19, Fed. R. Civ. P. and 28 U.S.C. §1651.

73. Comment: What requisite technology can be used to "cure" dioxin. Comment of Sister Margeen Hoffman at 166-7 (February 19, 1981 public hearing).

73. Response: There is no "cure" (i.e., a way to totally destroy or neutralize) for dioxin. One can incinerate dioxin with 99.999% efficiency, but there still may be .001% dioxin left. There are extremely expensive laboratory methods of destroying dioxin, but none has been tried on a large scale. One of the results sought through the requisite remedial technology concept is a solution to the dioxin contamination problem which will eliminate exposure to people and the environment. The study to be undertaken pursuant to Paragraph F of Addendum I will help us determine and implement the best solution to this problem. Whatever remedial option is chosen, the goal is to prevent migration of dioxin and other chemicals through the environment and prevent exposure to people. One of the purposes of the Requisite Remedial Technology concept is to

have industry expand its research in this field. For example, at least one defendant in another EPA hazardous waste case is studying methods of using bacteria to destroy or breakdown dioxin.

74. Comment: The settlement calls for a \$15 or 16.5 million clean up. Letter from Lawrence Maillet (January 30, 1981); Comment of Assemblyman Pellittere at 149 (February 19, 1981 public hearing).

74. Response: The Settlement Agreement does not call for a specific payment of money other than the \$1.5 million required in Paragraph 11. Hooker must comply with the terms of the agreement and expend whatever funds are necessary to accomplish this. Occidental Petroleum Corp. guarantees performance of the agreement in the event Hooker becomes insolvent. Addendum IV. There are two specific amounts of money referred to in the guarantee - \$10 million during construction and \$5 million after the construction phase of the program is over. Addendum IV, Paragraph 5. The Guaranteed amount however can be increased if that becomes necessary. Addendum IV, Paragraph 6. In effect because this Court can increase the amount of the guarantee, the guarantee covers the actual cost of clean up.

75. Comment: "Today's ambiguities and over-eagerness to act, either too hastily or ill-advisedly, could eventually lead us to inadequate monitoring practices and subsequent problems that are beyond our understanding at this time." Letter from G. Martin (February 23, 1981).

75. Response: We are not rushing into any part of this remedial program "ill advisedly". It took over one year to investigate this case and another year to reach a settlement. The perimeter capping described in Addendum I, Paragraph B will be carried out following a systematic search for contamination in the soil and groundwater outside the landfill. The leachate collection system described in Paragraph D of Addendum I must be proven effective for collecting contaminated groundwater at depths where contamination has been detected before it is installed. We have tried to bring the best scientific methods to bear in this program and it is, we believe, a sound and effective approach to an admittedly complex problem. Our technology and understanding will undoubtedly improve in the future, as it has in the past, but that is not a reason to delay implementation of this program.

76. Comment: The settlement is no more than what Hooker proposed in January 1979 and EPA could "require the firm to take the action proposed and pay for it without a settlement". Letter from Councilpersons Joan Gipp and William Heinz at 2 (February 9, 1981).
76. Response: The scope of the Settlement Agreement represents a substantial increase in clean up and containment efforts from what Hooker proposed in January of 1979. Bringing suit in December of 1979 was felt to be the best way to obtain the kind of program we believed to be necessary. The Settlement Agreement met all the Federal and State requirements to protect the public health. The Settlement Agreement therefore is a good program. If an administrative order is issued, for example, the company has the right to challenge the validity of the order. No clean up would occur until the order's validity was litigated. Unless there is enforcement of the order, it is a mere piece of paper.
77. Comment: The settlement gives industry and landfill operators the right to create an imminent hazard with no fear of government penalty nor any responsibility to protect and compensate their victims. Letter from Councilpersons Joan Gipp and William Heinz at 3 (February 9, 1981)
77. Response: No one has the right to create an imminent hazard. This settlement is an example of success in getting a landfill operator to remedy the effects of unregulated disposal practices in the past. It should be noted that in addition to the millions of dollars that it will cost to clean up this problem, the Settlement Agreement requires Hooker to pay \$1.5 million dollars into a State administered fund.
78. Comment: The Court is asked to modify the settlement to provide that whenever the government fails to respond to any response time in the Consent Judgment, Hooker be mandated to notify the Court of the government's inaction. Also, after such notification, the Court "is committed to order the government to respond". Citizens Alliance at 7 and 113-4 and 119-20 (February 19, 1981 public hearing); Citizens Alliance at 14.
78. Response: There are several provisions in the Settlement Agreement where the government has a specific deadline to respond to a submission of plans by Hooker, e.g., Paragraphs 6(c) and 7 (b). The purpose of these provisions is to obtain

expeditious action in cleaning up this problem. EPA and the State believe that the time limits are adequate for review. It should be kept in mind that EPA and the State will review all data monthly. The government only need respond if it objects to the plans which are submitted. There would be no purpose in ordering the government to respond if there was no reason to object to Hooker's submission and there is no reason to involve the Court unless there is a dispute which requires resolution.

79. Comment: Some commentators recited those portions of the Federal complaint that compared the detected values of various chemicals in sediment, water or groundwater and generally compared those values with EPA's Water Quality Criteria of one in a million risk level (i.e., the level of the chemical which is estimated would result in an additional cancer in a population of one million people exposed over a lifetime). Comment of Councilman Willam Heinz, in Letter of February 18, 1981 at 2 and at February 19, 1981 public meeting; comments of Councilwoman Joan Gipp and 1 (both in writing and at February 19, 1981 hearing); Letter from Councilman Alvin Ogg at 5-6 (February 21, 1981 hearing); Comments of Citizens Alliance at 2-3 and Comment at 110 (February 19, 1981 public hearing); Comment of Citizens Alliance at 4-5; Comments of Ecumenical Task Force at 8, Comments of College Heights Property Owners Association at 3.

79. Response: This comment misapprehends the EPA Water Quality Criteria and how they should be applied. The EPA Water Quality Criteria, "are not rules and they have no regulatory impact. Rather, these criteria present scientific data and guidance on the environmental effect of pollutants which can be useful to derive regulatory requirements based on considerations of water quality impacts." Water Quality Criteria Documents; Availability, 45 Fed. Reg. 79318, 79319 (1980). The human health effects risk assessments were cited in the complaint, not because it was known that the residents in the Hyde Park-Bloody Run area had in fact been exposed to that risk, but rather to give a comparative estimate of the toxicity of these chemicals and to estimate the potential risk to the residents if in fact they were exposed to these chemicals at the levels cited.

The complaint cites the Water Quality Criteria human health risk extrapolations. EPA's criteria for carcinogens and suspected carcinogens present concentrations for chemicals in water which correspond to an incremental cancer risk of one in an exposed population of one million (the one in a million

risk level)). What this means is that based on EPA's evaluation of human and animal dose/response test data, EPA estimates that if the average human drank 2 liters (approximately 2 quarts) per day of water with this concentration and ate 6.5 grams (less than .003 lbs) per day of fish and shell fish from waters with this concentration over 70 years, then there would be one additional cancer in a population of one million (or each individual would have an additional one in a million chance of developing cancer). 45 Fed. Reg. at 79323-4.

This risk assessment applies to the residents of the Hyde Park - Bloody Run area only if the residents have been drinking 2 liters of water from Bloody Run Creek for 70 years. The Water Quality Criteria risk assessments do not apply to absorption of chemicals through the skin or inhalation. In order to estimate the increased health risk from contact with the sediment in Bloody Run, one must calculate the amount of the chemical entering into the body through the skin. Similarly to calculate the increased health risk from inhalation of chemical-laden dusts one must calculate the amount of the chemical entering into the body through inhalation. The clean up of the surface water sediment and soil (the source of exposure must be done down to the detection limit for dioxin. Paragraph B(1)(cc)(ii) of Addendum I. The exposure to people (as opposed to bedrock or groundwater) will be zero.

In sum, the risk levels cited in the complaint are used to reflect the relative toxicity of these chemicals, but are not the risk levels to which the residents have been exposed.

Several commentators also specifically cited the statement that EPA's official water quality criterion for carcinogens is zero. Again this statement must be placed in context. The Water Quality Criteria regulations state that:

[b]ecause methods do not now exist to establish the presence of the threshold for carcinogenic effects, EPA's policy is that there is no scientific basis for estimating "safe" levels for carcinogens. The criteria for carcinogens, therefore, state that the recommended concentration for maximum protection of human health is zero. In addition, the Agency has presented a range of concentrations corresponding to incremental cancer risks of 10^{-6} to 10^{-4} The risk estimate range is presented for information purposes and does not represent an Agency judgment on an "acceptable" risk level.

45 Fed. Reg. 79323. In other words, by definition the only safe level (i.e., zero risk) is zero since any level may present an infinitesimal risk of harm. The question is not what is or is not "safe", but really what is acceptable. As the Supreme Court has indicated

"safe" is not the equivalent of "risk-free".
There are many activities that we engage in

every day such as driving a car or even breathing city air-that entail some risk of accident or material health impairment; nevertheless, few people would consider these activities "unsafe". Similarly, a workplace can hardly be considered "unsafe" unless it threatens the workers with a significant risk of harm. Industrial Union Dept., AFL-CIO v. American Petroleum Institute, U.S., 48 U.S.C.W. at 5031 (In reversing an OSHA decision made on the basis of an absolute, no risk policy regarding carcinogens Id. at 5036.) The Court also noted that its decision "did not strip ... [the Agency] of its ability to regulate carcinogens, nor will it require the Agency to wait for deaths to occur before taking any action Some risks are plainly acceptable and other are plainly unacceptable." Id. at 5039. It should be noted that none of EPA's Water Quality Criteria,

45 Fed. Reg. 79324-41, or maximum contaminant level regulations, which limit the amount of chemicals in drinking water in the United States, are set at zero. 40 C.F.R. §§141.12, 141.15, 141.16, and 141.30. Also see 40 C.F.R. Part 180 Subpart C (tolerance levels for pesticides on food).

The levels specified in this Settlement Agreement are at or below those established by Federal or State regulations. As indicated in the table listed below, all but two of the Settlement Agreement limits are below the water quality criteria human health levels (and one of the limits above the water quality criteria number is in effect below EPA drinking water limit).

Parameter	Settlement Agreement Treatment Level	Settlement Agreement Plume Def. Level	EPA Water Quality Criteria */
Phenol	10 mg/L (1 mg/L two years after effective date of Judgment)	.25 mg/L	3.5 mg/L
Trichloroethylene	10 ug/L	---	2.7 ug/L
Tetrachloroethylene	10 ug/L	---	0.8 ug/L
Monochlorotoluenes	10 ug/L	10 ug/L	---
Monochlorobenzene	10 ug/L	10 ug/L	488 ug/L
Trichlorobenzenes	10 ug/L	10 ug/L	---

*/ The one in a million risk level is cited for carcinogens or suspected carcinogens. 45 Fed. Reg. 79318-41. For non-carcinogens, the level cited is that below which there is no health effects, based on current data. 45 Fed. Reg. 731-41.

Tetrachlorobenzenes	10 ug/L	10 ug/L	38 ug/L
Monochlorobenzotrifluorides	10 ug/L	10 ug/L	---
Hexachlorobutadiene	10 ug/L	---	.45 ug/L
Hexachlorocyclopentadiene	10 ug/L	10 ug/L	206 ug/L
Hexachlorocyclohexanes	10 ug/L	10 ug/L	.009 ug/L**/
2,4,5-Trichlorophenol	10 ug/L	10 ug/L	2,600 ug/L
Tetrachlorodibenzo-p-dioxins	detection limit	detection limit	.000001 ug/L

The fundamental restriction in setting the limits in this Settlement Agreement was the detection limits for the chemicals. The Water Quality Criteria are mathematical extrapolations that do not take into account the practical limits of our technology. As stated previously, the dioxin limit in this Settlement Agreement is set at the detection limit for dioxin. The other chemical levels are approximately those levels which in EPA's experience are reliable detection levels regularly achieved by independent laboratories. There are experimental tests which may have achieved lower limits, but none involved the large numbers of analyses. The detection limit in soils for some chemicals, such as HCB, is much higher than in water, therefore the soil survey limits were set at higher levels (100 ppb versus 10 ppb). Finally, for phenol, the one case where the water quality criterion maximum level for protection of the public health (3.5 mg/l based on toxicity and .3 mg/l based on taste and smell) was above the detection limit, the Settlement Agreement specified a plume definition level lower than the Water Quality Criteria number, i.e., 0.25 mg/l. Paragraph C(1)(a) of Addendum I.

Since humans will not be exposed to chemicals which are ten to one hundred feet underground, the low levels specified in the Settlement Agreement will essentially provide zero exposure and zero risk.

80. Comment: Several comments compared the Federal complaint and the relief achieved in the Settlement Agreement. Explicitly or implicitly the fact that the government 'compromised' was attacked. See list of source of comments in Comment 79; Citizens Alliance at 7-15.

**/ The maximum amount of one of the five isomers of hexachlorocyclohexane (the gamma isomer) allowed in drinking water under EPA regulations is 4 ug/L. 40 CFR 141.2.

80. Response: A complaint lists allegations, i.e. statements which one party will attempt to prove by the presentation of evidence at trial.

The fact that EPA sets forth a particular remedy in its prayer for relief does not mean that when more data is available, another remedy may be determined to be more appropriate. When a case is filed, often, particularly in groundwater contamination hazardous waste cases, much of the factual information needed to determine the appropriate remedy is literally buried underground. The process of obtaining this evidence is logistically and practically difficult and time consuming. All technical and scientific experts alter their judgment on appropriate technology based on new information. The Federal and State governments received substantial additional information after the complaint was filed. The Federal and State technical personnel were also able to learn from each other. Also, as is explained in the response to other comments, certain remedial approaches in the Settlement Agreement are contingent on field tests proving that they will work.

The Federal government believes that substantially everything requested in this Complaint was obtained or was found to be unnecessary. The following is a comparison of the Federal Complaint and the Settlement Agreement.

Paragraph A(1): Install and maintain a perpetual monitoring program for all subsurface water beneath the Hyde Park landfill and its immediate vicinity. This program shall include monitoring wells on-site and off-site into each water bearing zone, the location and design of monitoring wells and the frequency of monitoring to be established with the approval of the Environmental Protection Agency. Monitoring may be discontinued, only if the United States agrees that it is no longer necessary.

Settlement: The monitoring is required as long as there is an endangerment, i.e., the risk of harm. See the response to Comment 55.

Paragraph A(2): In addition to the subsurface water monitoring required by subparagraph (1), install and maintain a perpetual program of periodic sampling of air, soil, streams, and sediment in the vicinity of the Hyde Park landfill, to determine the effectiveness of the immobilization efforts for Hyde Park landfill leachate. As with subsurface water monitoring, this monitoring may be discontinued only with the approval of the United States.

Settlement: The Monitoring Program outlined in Addendum II and the monitoring provisions of the Environmental Health and Safety Plan outlined in Addendum V provide for environmental monitoring in the vicinity of the Hyde Park landfill until termination as described in paragraph Q, Addendum II and in paragraph F of Addendum III. If additional monitoring is identified as being needed by the data being accumulated, then the Settlement Agreement, Paragraphs C(8) and C(9) of Addendum I, for example, can be used to obtain additional monitoring. If review of plans and specifications by EPA/State identify the need for additional environmental monitoring, additional monitoring will be proposed in the written response to the review. Also see the response to comment 55.

Paragraph A(3): Conduct or pay for complete medical studies of all workers and residents in a one mile radius of the Hyde Park landfill who worked or resided in the area from 1953 to the present to determine the extent to which any person may experience adverse health effects; undertake or pay for a health monitoring program that will track past and present workers and residents who worked or resided within a one mile radius of the Hyde Park landfill and the offspring of those workers and residents for their lifetime.

Settlement: As indicated in the Response to Comment 11, a medical study of workers and residents has been performed by NIOSH. Congress has established a registry for persons exposed to toxic chemicals.

Paragraph A(4): Restructure present Hyde Park landfill closure operations according to EPA specifications, eliminating improper crown slope, moisture infiltration, and erosion; and provide for treatment of runoff from the site to prevent any hazardous waste from reaching Bloody Run. Maintain, monitor and upgrade as necessary the existing leachate collection, treatment, and disposal program.

Settlement: Paragraph L, Addendum I provides for site closure according to EPA and State specifications. Paragraph E of Addendum II provides for monitoring of runoff from the Hyde Park landfill. If the monitoring levels defined in paragraphs F & G of Addendum II are not met, then Hooker is required by paragraph J(3) of Addendum II to apply Requisite Remedial Technology to clean up this contamination. Addendum III, Addendum II and paragraphs D(1) and E of Addendum I provide for maintenance, monitoring and upgrading of the existing leachate collection, treatment and disposal systems.

Paragraph A(5): Install a grout curtain down to bedrock completely surrounding the site. Install a new leachate collection system within the grout curtain wall. Filter the leachate withdrawn through granular activated carbon filters and incinerate the liquid residue and carbon.

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Settlement: The Settlement requires a leachate collection and treatment system as requested in the complaint. Paragraph D(2) of Addendum I, provides for installation of a new leachate collection system in the overburden and Paragraph D(3) provides for a purge well system in the upper 15 feet of the bedrock. These two systems have been located in such a manner as to completely intercept the groundwater flow through and beneath the landfill. Until we know the full depth and extent of chemical migration, it cannot be determined whether a grout curtain wall is necessary or would work. Paragraph D(7) requires a study of Requisite Remedial Technology, including a grout curtain wall, grouting through controlled fractures, and installation of a tile drain system fifteen feet below the top of bedrock, to address contamination below the 15 foot level and off-site. When all the survey and technology data is submitted as required by Paragraph C(8) of Addendum I, it will then be determined what additional technologies, if any, are feasible and should be required. Paragraph C(9) provides the mechanism to do this.

Paragraph A(6): Vent the area within the grout curtain wall.

Settlement: It was the best judgment of the technical experts that venting to prevent vapor build-up will not be necessary after the remedial measures are installed because of the past history and condition of the Hyde Park landfill. Vapor escape from the on-site lagoons was virtually eliminated by covering those lagoons. It is important to note, however, that the use of Requisite Remedial Technology in the Settlement Agreement allows for the addition of technology for venting if and when the data gathering effort identifies the need for venting.

Paragraph A(7): Divert Bloody Run by excavation, conduit, or as otherwise appropriate in accordance with the specifications of EPA, the United States Army Corps of Engineers and the State of New York, in order to allow the clean up of existing contamination and prevent future contamination, and in particular remove all dioxin in Bloody Run and dispose of it in an environmentally sound manner with the approval of EPA. Also, Paragraph A(11): Prevent hazardous wastes from reaching Bloody Run or the Niagara River.

Settlement: Paragraphs F, G, H, I, and K of Addendum I describe the remedial measures to be performed in the Bloody Run drainage basin taking into consideration the dioxin contamination present in that drainage basin. Either excavation or capping will be required. This measure will prevent wastes from entering the Niagara River.

Paragraph A(8): Determine whether the storm sewer near Niagara University is contaminated, and if so, clean it up.

Settlement: Paragraphs G(2)(C) and H(2)(C) describe the remedial measures to be performed on the storm sewer near Niagara University depending on whether capping or excavation of Bloody Run is performed. In any case, the storm sewer along University Drive will be replaced and all other storm sewers will be either replaced or cleaned.

Paragraph A(9): Determine whether Hooker contaminants have infiltrated property at surrounding work sites, and if so, undertake measures to clean-up and prevent future contamination.

Settlement: The Paragraph C, Addendum I survey will determine whether there is surface soil or groundwater contamination on or under such property. If the groundwater or soils around the homes or work sites are chemical-laden, Hooker will be required to cap the surface and to determine what Requisite Remedial Technology, if any, will clean up the groundwater problem. The State will undertake a comprehensive program to determine the extent of contamination from airborne migration. Paragraph M of Addendum I provides a method to clean up any such particulates. If this contamination is determined to constitute an endangerment to human health and the environment, Hooker must initiate corrective action to clean up such contamination and take other appropriate action to further protect human health and the environment.

Paragraph A(10): Perpetual maintenance.

Settlement: Addendum III: (Maintenance Program) describes the maintenance to be performed on the remedial measures outlined in the Containment Program and Monitoring Program. See response to Comment 55.

Paragraph A(12): Cease unpermitted discharging of pollutants into waters of the United States.

Settlement: The remedial measures provided by Paragraphs F, G, H, I, and K of Addendum I in conjunction with the other remedial measures described for the Containment Program are designed to prevent the unpermitted discharge of pollutants into the waters of the United States.

Paragraph B. That the Court order Hooker to reimburse the United States of America for all funds expended for remedial actions related to the discharge of Hooker's wastes from Hyde Park including, but not limited to, funds expended by the Administrator of EPA in identifying and analyzing Hooker's wastes;

Paragraph D. With regard to violation of the Clean Water Act, that the Court order Hooker to pay to the United States a civil penalty of \$10,000 per day for each and every day it has violated the Clean Water Act; and

Paragraph F. That the Court award plaintiff its costs of suit herein and any other relief the Court finds just and appropriate.

Settlement: The Settlement Agreement provides for the establishment of a \$1.5 million dollar State administered fund in exchange for the releases provided in the Settlement Agreement. Paragraph 11 of the Settlement Agreement.

Paragraph C. To insure the payment of funds to finance the measures ordered in subparagraph "A", that the Court order defendants either to:

(1) Deposit \$6,080,000 in an annuity trust account for the accomplishment of those measures or,

(2) Obtain a bond immediately against their insolvency insuring that funds will be available to finance the measures ordered in subparagraph "A".

Settlement: The purpose of this requested relief was to assure performance of the remedial program. Paragraph 12 of the Judgment and Addendum IV provide a financial guarantee from Occidental Petroleum Corp. or its successor in interest. As described in the response to Comment 74, this guarantee can be amended to cover whatever amount is necessary to fulfill Hooker's obligations under this Settlement Agreement. It should be noted the Occidental Petroleum Corp. is a multi-billion dollar corporation. The Federal government believes that the guarantee achieves

the same purpose as the prayer for relief. Such a guarantee meets the financial requirements of the proposed RCRA regulations. 45 Fed. Reg. 33265-73 (to be codified at 40 CFR §265.140 et seq.).

Paragraph E. That the Court retain jurisdiction in this matter until such time as all remedial measures have been effectuated.

Settlement: Paragraph 19 of the Judgment provides for this Court's continuing jurisdiction.

There are many people who believe that any settlement that Hooker would agree to is by definition not acceptable. It is the policy of the Federal and State governments not to settle any case unless it furthers the protection of the public health and the environment. The Settlement Agreement meets this criteria and, as indicated above, stands on its merits.

With regard to the view that no compromises should ever be reached, it should be recognized, as this Court stated, that:

[in] a settlement in any lawsuit, ...it is absolutely necessary that to gain an advantage every party must give up something, but one, of course, result of a settlement is that we have in place the Agreement, we avoid extensive litigation...

On the other hand, if we do not settle our differences, there will certainly be a substantial wait before an order can be in place.... However, any lawsuit is better settled than tried almost any time..."

Transcript of February 10, 1980, court hearing (hereinafter referred to as February 10, 1981 hearing) at 7-8, 150.

There is no reason to litigate a case (and thereby delay the remedy for years) when a settlement which achieves the purposes of the lawsuit is in hand.

81. Comment: One commentor expressed a concern that the negotiators did not examine the agreement between Hooker and other States, particularly since it has been alleged that the consent agreement in the State of Michigan v. Hooker Chemical Corp. File No. 79-22878-CE (Cir. Ct. County of Ingham, Oct. 30, 1979) has been violated. Letter from Councilman Alvin Ogg at 9 (February 21, 1981).

81. Response: Both EPA and the State were familiar with the Hooker Montague judgment even before negotiations commenced. Prior to lodging the Settlement Agreement, EPA and the State had no information concerning any violations of that judgment. Upon receipt of information similar to that alluded to in the comment, Jack Bails of the Michigan Department of Natural Resources (the staff person in charge of monitoring the Montague judgment) was contacted by EPA. Mr. Bails unequivocally stated that Hooker was in compliance with the judgment and in fact had completed most milestones (i.e. interim construction steps) ahead of schedule. A search of news articles also does not reveal any articles indicating Hooker is not in compliance with its Montague judgment.

Furthermore, the United States and the State of California are co-plaintiff in United States, et al. v. Occidental Petroleum Corporation et al., No. S-79-989 MLS (E.D. Cal., filed December 20, 1979). For the past year Occidental has performed a detailed groundwater survey under a partial stipulation. EPA's and California's experience is that Occidental has fully complied with the terms of the partial stipulation. See Exhibit B of the Responses to Court's Order of February 12, 1981 for a copy of the Settlement Agreement reached in that case.

82. Comment: "There are certain factors or measurements which could be assessed and certain testing which would be done to determine whether the physical environment, whether the health of people, does require immediate permanent relocation." Comment of Barbara Morrison at 172 (February 19, 1981 public hearing).
82. Response: See the Response to Comment 1.
83. Comment: There is a concern about possible radioactive wastes in the Hyde Park area. This concern is based upon information released at a Department of Energy press conference on January 28, 1980. Letter from Councilman Alvin Ogg at 8 (February 21, 1981).
83. Response: EPA checked with the Department of Energy (DOE) concerning the radioactive waste survey referred to in the comment. A DOE contractor performed an aerial radiological survey in 1979, in conjunction with DOE's study to determine where and how radiological wastes from Federal programs were disposed of. No final report has been issued. Telephone conversations with representatives of DOE, however, indicate that the survey did not detect any radiation levels above background in the vicinity of the Hyde

Park landfill. Of course, there is a background level of radiation everywhere on earth and the background level varies from place to place. Finally, even if radioactive wastes were on the landfill, there is nothing about the physical properties of these substances which would cause the remedial measures specified in the Settlement Agreement to be ineffective.

84. Comment: We should drill groundwater wells inside the Grief Brothers plant. Comment of Lawrence Maillet at 130 (February 19, 1981 public hearing).
84. Response: The wells described in Paragraphs B and C of Addendum I are located in such a way as to give us a comprehensive and accurate picture of where there is groundwater contamination. It is unnecessary to drill wells directly inside the Grief Brothers plant.
85. Comment: There are chemicals underground under Grief Brothers. Letter from Lawrence Maillet (January 30, 1981).
85. Response: If there is groundwater contamination or nonaqueous phase chemicals below the Grief Brothers plant, the monitoring wells provided for in Paragraphs B and C of Addendum I will detect this contamination and it will be addressed pursuant to the terms of the Settlement Agreement.
86. Comment: The possible present or future impact on Niagara University and its students has not been addressed. Letter from Councilpersons Joan Gipp and William Heinz (February 9, 1981).
86. Response: The Settlement Agreement provides that Hooker must identify the extent of chemical migration and if it is found to include areas within the University, the problem will be addressed pursuant to the terms of the Settlement Agreement.
87. Comment: The proposed consent agreement does not comply with EPA's proposed standards for hazardous waste management. Letter from Hugh Kaufman to Barbara Morrison (March 7, 1981); attached as Exhibit (in comments of Ecumenical Task Force (March 1981)).
87. Response: EPA's proposed hazardous waste regulations "do not by their terms apply to inactive (either closed or abandoned) disposal facilities." 45 Fed. Reg. 33170. However, the requirements in this Settlement Agreement equal or exceed EPA existing or proposed regulations. For example, the regulations focus only on the "uppermost aquifer", 45 Fed. Reg. 33191-2,

but the Settlement Agreement is not so limited. Also under Paragraph 11 (c)(ii), (iii), Hooker must comply with all future statutes, regulations, and permits should they apply to closed landfills. In addition to this general requirement, the Settlement Agreement requires Hooker to comply with applicable Federal and State statutes and/or regulations in numerous instances. Paragraphs E (1), E(2)(a), E(4); E(6)(f); E(8)(a), Paragraph M of Addendum I, and Paragraph P of Addendum II. In two other provisions, the statute or a proposed regulation is followed virtually word for word. Paragraphs E(1)(a) and E(6) of Addendum I.

88. Comment: Adherence to RCRA hazardous waste regulations alone, even if complied with, would not adequately protect the Hyde Park community in this unique case. Letter from Hugh Kaufman to Barbara Morrison (March 7, 1981) in Exhibit C of comments of Ecumenical Task Force (March 1981).
88. Response: The requirements of the Settlement Agreement exceed the regulations. See also Response to Comment 87.
89. Comment: It is clear to me that the court should determine whether the proposed activities required by the consent agreement involve the treatment, storage, and disposal of hazardous waste. Letter from Hugh Kaufman to Barbara Morrison (March 7, 1981) in Exhibit C of Comments of Ecumenical Task Force (March 1981).
89. Response: This comment is difficult, if not impossible, to interpret. It is obvious that all activities required by the Settlement Agreement involve the treatment, storage, or disposal of hazardous waste. The purpose of the court determination is unclear.
90. Comment: No remedial action program can be developed until adequate monitoring and testing has occurred. This is true because an environmental and public health profile is required prior to design of any remedial action. This is why §3013 of RCRA was modified last year to enable EPA to require such monitoring and testing prior to remedial action development. Letter from Hugh Kaufman to Barbara Morrison (March 7, 1981) in Exhibit C of Comment of Ecumenical Task Force (March 1981).
90. Response: The final remedial program for offsite groundwater contamination cannot be determined until adequate monitoring and testing has occurred. This is why the Settlement Agreement requires, as its first priority, a series of surveys and monitoring. Paragraph B, C, G, and H of Addendum I. Some remedial measures can be specified now, e.g. perimeter capping.

Paragraph B of Addendum I. If an administrative order were adequate in this case, there would be no need for a lawsuit. Administrative orders do not, however, have the range of protections and sanctions available under the Settlement Agreement and in any event must be enforced in court. It should be noted that §3013 of RCRA was not "modified" last October, but along with §3012 of RCRA was added to RCRA.

91. Comment: With respect to your supplemental inquiry, based on my engineering experience in the hazardous waste field, the state of the art has not developed to a degree where the term "requisite remedial technology" has any basis in science or engineering. Because of this fact, it appears from my reading of the consent agreement that Hooker could use any technology it chooses at a minimal cost and simultaneously be absolved from further liability from government suit for all damages past, present, and future to public health and the environment. Letter from Hugh Kaufman to Barbara Morrison, (March 7, 1981) in Exhibit C of Comments of Ecumenical Task Force (March 1981).
91. Response: This comment is based on a fundamentally false premise. The Federal and State governments have not asserted that the term "requisite remedial technology" is an established scientific or engineering term. It is, as explained in more detail in the response to Comment 21, a standard of review to resolve disputes. The assertion that Hooker could use "any technology it chooses at minimal costs ..." indicates a total misapprehension of the "arbitrary and capricious" standard of Paragraph 4(c).

Finally, Hooker is not released from liability for past actions unless Hooker is in "[c]ompliance with the provision of this Judgment. . ." including obviously Paragraph 4(c). Even if Hooker complies with the Settlement Agreement, Hooker remains liable for civil or criminal penalties in an action relating to the migration or discharge of chemicals whose occurrence were neither known nor could have been reasonably anticipated by any governmental party to the Settlement Agreement; violations of permits; and penalties for violations of an injunctive order. Paragraph 11(c,d).

92. Comment: "Based on my experience, */ I do not believe that the consent agreement will minimize health risks to the communities involved. There are health risks at the site because of the nature of the wastes and the current methods of management. In fact, I believe that the settlement as constituted will increase the health risk to the communities involved. Specifically, because of the highly toxic nature of the waste at Hyde Park Landfill (e.g. Dioxin), and because of the potential for contamination through air, soil, and water of these materials, the health risks to the community could increase significantly during and after implementation of the proposed consent agreement. However, there is no way to quantify or identify health risks without monitoring and testing, neither of which has been done to my knowledge." Letter from Hugh Kaufman to Barbara Morrison (March 7, 1981) (Exhibit C of Ecumenical Task Force Comment (March 8, 1981)).
92. Response: Since no facts or specifics are cited it is difficult to answer this comment. Clearly there is a potential for contamination and increased health risks because of the presence of dioxin. The remedial measures in the Settlement Agreement are designed to eliminate this potential. The Health and Safety Plan is designed to minimize health risks to the communities.

Finally, as has been explained in the responses to other comments, there will be extensive monitoring before construction to determine the extent of the presence of chemicals and therefore the associated risks. During the construction, the Settlement Agreement calls for continuous monitoring and clean up if any chemical-laden dust above background leaves the site.

93. Comment: "The EPA policy for bringing cases to the court under RCRA §7003 was to enable the courts to set regulatory precedents for protection of the public health and environment from hazardous waste practices. The first cases brought were cases in which we hoped to obtain the courts' assistance in setting a bottom line for environmental and public health

*/ This letter expresses the private personal views of the author, although the author is an Assistant to the Director, EPA Hazardous Waste Site Control Division. The fact that the letter is on official EPA stationery is contrary to normal practice at EPA for private communications. The letter alleges that Mr. Kaufman started and managed "the federal program which these cases are based on". Mr. Kaufman has never worked for any EPA enforcement office. More specifically, he has never worked for Hazardous Waste Enforcement. He has not been involved in any way in this litigation.

protection. This proposed consent agreement does not effectuate that policy. I believe the change of policy occurred because of the pressures of the Presidential election of 1980, which would have predisposed the White House to soften the government's actions against companies with potentially large financial liabilities as a result of their hazardous waste management practices." Letter from Hugh Kaufman to Barbara Morrison (March 7, 1981) in Exhibit C of Comments of Ecumenical Task Force (March 1981).

93. Response: Mr. Kaufman was not involved with the setting of EPA Hazardous Waste Enforcement policy. The first priority in such \$7003 cases is to clean up the problem. Litigating cases simply to set legal precedent is irresponsible, if it delays the protection of the public health.

Finally, it is simply not true that the White House had any involvement whatsoever in this case.

If Mr. Kaufman alleges that such contact or change of policy occurred, he is totally misinformed. Since he had no personal knowledge of the case or negotiations, it is difficult to determine the basis for the allegation.

94. Comment: One comment requested an extension of the March 7, 1981 deadline for public comment, in order to review the underlying data which was the basis of the Settlement Agreement.

94. Response: All the underlying data has been made available to the public, except for confidential medical information. This Court extended the deadline for submission of comments until March 20, 1981.

As was pointed out in the Response to the Court order of February 12, 1981 (filed March 18, 1981), the Settlement Agreement is a highly technical document which is the result of the composite input of over 44 technical advisers and consultants from government and industry with expertise in the fields of engineering, hydrology, chemistry, medicine, toxicology, soils, and geology. No one or several citizen-selected experts could be proficient in all of the technical disciplines required. Any extension would necessarily be of

substantial duration if its purpose is to review the numerous technical decisions made during the course of negotiations.

The purpose of 28 C.F.R. §50.7 public comment process is to "disclose facts or considerations which indicate that the proposed judgment is inappropriate, improper or inadequate..." The purpose of the proposed extension is not to disclose new facts or considerations, but to allow the commentators to review those facts and apply their own interpretation. It is "not [the]...function [of the courts] to resolve disagreements among the experts or to judge the merits of competing views..." Lead Indus. Ass'n Inc. v. EPA, 14 ERC 1916, 1929 (D.C. Cir. 1980). Although there have been many comments received, no technical issues or considerations have been received which were not raised, discussed and decided by the parties during the negotiations. A further extension of the comment period to have a public review of technical determinations would not serve the goals of the 28 CFR §50.7 process and would delay implementation of remedial plans designed to remove the endan-germent to the public.

95. Comment: If the air monitors in Paragraph J detect contaminated dust leaving the construction site, how is the area going to be cleared and confusion and panic going to be avoided. Letter from Grief Bros. Employees (March 2, 1981)
95. Response: The Settlement Agreement provides that before construction begins "Hooker shall submit to EPA/State contingency plans and schedules..." concerning all aspects of the Health and Safety Plan. Paragraph J(5)(e) of Addendum V. This contingency plan will include a description of the "procedure to be utilized in notifying the residents and other individuals that property surveying shall occur..." because of the movement of chemical-laden dust off site and the "procedures to be followed in relocating residents, if required..." Paragraph J (5) (e) of Addendum V. Of course, among the other individuals that will be notified and relocated, if necessary, would be the workers in the area. When this contingency plan is submitted, EPA and the State will solicit the views of the employees and the public in general.

It should be noted that under Paragraph L (2)(c), no construction will occur within 50 feet of any of the plants in the areas during working hours. Since Hooker has offered to buy the nine homes in the Bloody Run drainage basin, no residents should be directly adjacent to construction,

Finally, as indicated in the Response to Comment 24, all detailed plans, specifications and protocols will be made publically available as received from Hooker and union representatives will be kept informed of the schedule.

96. Comment: "What does the state and Federal Government call an immediate danger, when you breathe contaminated particles and drop dead all at once or breathe it on and it shortens your life span of 10, maybe 20 years." Letter from the employees of the Grief Bros. (March 2, 1981).
96. Response: Both situations are addressed by the Settlement. Paragraph J (2) of Addendum V requires continuous monitoring in the construction area for volatile chemicals and flammability. All construction is shut down if the lower explosive limit is approached. This limit protects against immediate substantial injury.

All the chemical limits in the Settlement Agreement are several orders of magnitude below the lethal limits or even the concentration at which physical symptoms are observable. Also see the response to comment 79 for a fuller discussion of these issues. These levels are based on the limits of the technology available to detect the presence of chemicals. See the response to comment 79. For dioxin, the Settlement Agreement states that dioxin shall be analyzed for, "at a detection level achieved using generally accepted high resolution mass spectrometry TCDD analytical techniques.") Paragraph B(1)(c)(i) of Addendum I.

97. Comment: One commentator requested the Court to publish notice of citizen suit provisions of various statutes. Comments of Citizens Alliance at 2.
97. Response: There are citizen suit provisions under most Federal environmental statutes. None of those statutes requires EPA or the Courts to publish notice of the existence of citizen suit provisions. The function of the public notice published pursuant to 28 C.F.R. §50.7 and the public hearings held were intended to inform the public about the settlement Agreement and to obtain their comments about it.
98. Comment: Because technology is not constant over time but in fact changes, we believe that any adopted consent decree should provide that the acceptable effluent levels would be reduced in accordance with changes in technology over time. Comments of Citizens Alliance at 12; Comments of College Heights Property Owners Association at 6.
98. Response: The treatment limits in Paragraph E of Addendum I can be lowered over time in a manner provided for by existing

and future statutes. Paragraphs E (1), E (2)(c), E(3)(b), E (c)(4), E(g)(1), and E (8)(a) of Addendum I; Paragraph P of Addendum II; and generally Paragraph 11(c) of the Judgment. Under the Settlement Agreement Hooker must obtain all necessary Federal and State permits. The limits in those permits will be reviewed at permit re-issuance, and if it is warranted the levels can be reduced.

It should be remembered that if the systems required by the Settlement Agreement are effective, the problem will be eliminated, i.e., the exposure to chemicals. If the systems are not effective, Hooker is required to install additional Requisite Remedial Technology. Paragraph J of Addendum I.

99. Comment: "The agreement nowhere specifies where vast quantities of contaminated wastewater and leachate will be stored prior to treatment. It appears that no facilities beyond the two lagoons present at the site have been contemplated... If these lagoons are used as storage facilities for untreated waste, ... [they should be] drained, dredged, and fully lined... and a bubble or dome should enclose the lagoons. It would be preferable, however, to require enclosed storage tanks and undertake closure of the open lagoons in accordance with federal regulations." Comment of Ecumenical Task Force at 4; Letter from J. Kieffer to Barbara Morrison (March 3, 1981).
99. Response: The Settlement Agreement provides that the "Barrier Collection Systems described herein shall include necessary facilities for pumping, storing, and loading as well as appropriate facilities for operational personnel." (emphasis added) Paragraph D(6) of Addendum J.

Additionally, the Settlement Agreement requires that all liquids collected "pursuant to Paragraphs C and D shall, prior to treatment, be temporarily stored in facilities installed pursuant to subparagraph D(6)." (emphasis added). Paragraph E(8)(a) of Addendum I.

The Settlement Agreement states that "[u]ntil installation of such storage facilities, Hooker shall store liquids described at subparagraph (a), at Hooker's option, in the existing lagoons... and/or in bulk containers..." (emphasis added) Paragraph E(8)(b) of Addendum I. Finally, it should be noted that the existing lagoons do have a temporary cover over them. The Settlement Agreement, however, requires Hooker to test the lagoons for leaks if they are still in use one year after entry of the Settlement Agreement. Appropriate action to require sealing must be taken if the lagoons are found to leak. It should be noted that the Overburden and Bedrock

Barrier Collection Systems and whatever Requisite Remedial Technology is installed to contain and clean up off-site contamination will intercept any of the small amount of liquids that might escape from the lagoons in this one year period.

100. Comment: The Court should not approve the Settlement Agreement until there is an identification and disclosure of health risk from the existence of the landfill and the proposed remedial activities. Comment of the Ecumenical Task Force at 5.
100. Response: There is no logical connection between a detailed description of past risks and approval of the Settlement Agreement. The Federal Complaint and the EPA Water Quality Criteria Documents, 45 Fed. Reg. 79318 (1980) summarize the health risks, if there is exposure to these chemicals. See the response to comment 79. However, trying to reconstruct past actual exposures is a difficult task.

The risk of future exposure is obviously relevant, although still difficult to calculate. If the procedures in Addendum V are followed, there will be no dust levels above background leaving the construction site and therefore no increased risk to the public. Hooker must demonstrate before construction that their dust suppression system will work.

101. Comment: One commentor opposed the agreement because it was impossible to determine the appropriate remedy without data but also opposed the Settlement Agreement because it was structured to obtain that data. It was suggested that an administrative order was more appropriate. Comment of Ecumenical Task Force at 5-6.
101. Response: As described more fully in response to Comment 20, we agree that for certain remedies more data is necessary. EPA policy is to require in a consent judgment that the company obtain that data. An administrative order would not have achieved a different result.
102. Comment: The use of TCP and HCB as surrogates was questioned. It was stated that it was valid only where firm experimental data indicated that there is a constant ratio of the surrogates to TCDD. Comment of Ecumenical Task Force at 7.
102. Response: The scientific reliability of the ratio is irrelevant because Hooker must confirm the outer boundary using actual dioxin measurements. Paragraph B(1)(C)(i) of Addendum I.

The use of surrogate measures is helpful in that it speeds the determination of the perimeter boundary since the measurement of HCB and TCP are easier and quicker to perform. There is firm evidence both from the field measurements and from knowledge of the source of the dioxin, that these chemicals are appropriate surrogates in this case. TCP is a very good surrogate because the source of dioxin is as an impurity in the manufacture of TCP. Therefore, TCP and dioxin were created together and disposed at the same time. The field measurements confirm the ratio. Given the field measurements and the similarity of some of the physical characteristics, HCB was also determined to be a good indicator of the presence of dioxin at this site.

103. Comment: The GC (gas chromatograph) equipment planned for use in testing organic vapor levels would be inadequate if the required level of detection is significantly lowered. In that event, GC-MS (gas chromatography-mass spectroscopy), equipment would be necessary. Comment of Ecumenical Task Force at 10.

103. Response: We do not believe that it is technically possible to significantly lower the limit at this time. There are no field GC-MS units used for measurements of air. The equipment specified in J(1) of Addendum V can detect the chemicals at the levels specified in the field. If the instruments can not, the Settlement Agreement specifies that the performance equivalent can be used.

104. Comment: All chemicals that would possibly be in the landfill must be sampled for, not just those few named in the Agreement. Comment of Ecumenical Task Force at 10.

104. Response: Measurement for each chemical is unnecessary and would simply delay the process because of the additional time needed for analysis. It should be noted that for the purposes of the identification of the aqueous phase plume of chemical-laden groundwater, the Settlement Agreement requires that "[d]etection of any such parameter [i.e., any one of eight of the chemicals listed in Paragraph C(1)(a)] of Addendum I at or above its plume definition level shall establish a rebuttable presumption... that chemicals disposed of at the Landfill Site are present in the plume." Paragraph C(1)(b). The detection of any of the other five parameters above the definition level requires Hooker to establish that the plume is not attributable to migration from the landfill. Paragraph C(1)(b) of Addendum I. Both of these provisions place on Hooker the burden of disproving by further sampling, that all of the chemicals from the landfill are not present.

* If the commentor is concerned that all chemicals must be analyzed for in order to make a risk assessment, it must be emphasized that dioxin is orders of magnitude more toxic than any other chemical disposed of at the site. Between actual measurements of dioxin and other chemicals, the potential increased risk could be estimated. Since most of the chemicals are underground, there is no exposure and therefore no increased risk from those chemicals. The Settlement Agreement also requires removal or capping of any detectable level of dioxin, therefore there will effectively be no additional exposure and no increased risk. Addendum V requires that there be no increased level of dust leaving the site during construction.

105. Comment: "Any placement of ambient air monitoring stations cannot be planned without determining or designating potentially affected areas, and testing for adequate parameters at sufficiently low detection levels." Comment of Ecumenical Task Force at 10-11.
105. Response: The Settlement Agreement requires that "Hooker shall establish ambient air monitoring stations at representative locations beyond the perimeter at the site." Paragraph J(5)(a). First, the location of the construction must be specified pursuant to the survey required by the Settlement Agreement. Second, for the Bloody Run Construction, the Bloody Run Evaluation will obtain additional information. Based on all the available information, a statistically representative number of monitors and appropriate locations will then be selected. All such plans will be submitted to EPA and the State before construction begins. Unless EPA and the State or this Court approves such plan, it will be revised until it can be approved.
106. Comment: The provisions for medical examination of workers in Addendum V are inadequate. Comments of Ecumenical Task Force at 11.
106. Response: The Settlement Agreement requirements for medical examination (both the types of tests performed, the number, and the length of time the records are kept) are more extensive than what is required by OSHA, industry or even by EPA for its own employees or contractors. The Settlement Agreement requires that each employee may obtain his medical records and that Hooker establish a registry of each individual. That registry will be turned over to EPA and the State after construction. EPA will turn this registry to the Agency for Toxic Substances and Disease Registry which has been given sole Federal authority to maintain such records. The records will be available to each individual at any time.

107. Comment: "While our experts cannot definitely suggest what protocols, testing parameters, and preventive actions are absolutely necessary for the protection of public health without review of underlying data; there is clear agreement that what has been proposed is absolutely inadequate, even with the very limited information at their disposal." Ecumenical Task Force at 15.
107. Response: Some of the conclusions drawn by the experts are based upon false assumptions. We have separately answered each comment raised by these experts. None of the comments demonstrate any error in or omission from the Settlement Agreement. It must be noted that the letters from two of the experts consulted by the Ecumenical Task Force (attached to their comments as exhibits A and B) contain no absolute statement that the remedial plan is inadequate such as was quoted in the comment and in many cases simply asked what was the basis for the choices or methods cited in the Settlement Agreement.
108. Comment: It is universally accepted that the only serious long term guarantee from recurring problems at a chemical landfill site is to set aside money for perpetual care. Comment of College Heights Property Owners Association at 5 (March 12, 1981).
108. Response: Neither Federal nor State statutes or regulations provide for perpetual care by the owner or operator of a hazardous waste site. As described in the response to Comment 55 this Settlement Agreement provides for care as long as the landfill may present an endangerment to the public. If the endangerment is removed through collection and treatment of the chemicals in the landfill as required by the Settlement Agreement, there would no longer be a need for care. There is no practical method of establishing a fund for perpetual care. Congress recently determined that the best way to guarantee perpetual care of landfills closed in the future is to pay for that care out of a tax paid yearly by the generator of the chemical waste, not out of money set aside. Section 107(k)(1) of Superfund Act. This statute does not apply to the Hyde Park landfill since it has been closed for many years.
109. Comment: It is necessary to obtain a complete disclosure of all chemicals contained in the Hyde Park landfill. Comment of Ecumenical Task Force at 7.
109. Response: The Federal complaint contains the most recent and accurate list of the type and quantity of chemicals disposed

of at the Hyde Park Landfill. See Paragraph 18 of the Federal Complaint. All measurements obtained to date are now publically available. See the Response to Comments 24 and 25.

110. Comment: "The provision for 'sealing' of dwellings is impractical, since complete sealing is almost impossible, and contaminants settle in grass, soils, and upon the outer structure of homes and garages." Comment of Ecumenical Task Force at 15.
110. Response: The Settlement Agreement, not only requires sealing, but requires Hooker after construction to remove all particulates on the property and to sample to determine that the particulates are eliminated. As in the case of the nearby factories, removal of all dust from the homes will remove all chemical-laden dust. Since Hooker has offered to purchase all nine homes which are likely to be abutting the construction site, this question may be moot. See the response to comment 1.
111. Comment: For those who choose not to relocate, tax reduction should be provided. The loss of government revenue should be made up by Hooker. Comment of College Heights Home Owners Association at 4.
111. Response: The Federal and State taxing authority is established by both constitutions and statutes and can be changed only by Congress and the State legislature, respectively. No agency, especially not environmental and health agencies, have any authority to change the tax laws. In the case of local property tax, in the agreement between Hooker and the Towns, Hooker has agreed to pay the Town of Lewiston an amount equal to the estimated quarterly sewer operation and maintenance tax revenue for the nine properties on the Bloody Run Drainage basin and an amount equal to the portion of the sewer charges which the Town reduces for the twenty-seven properties between Penrose Street and Marshall Avenue and between Sherman Avenue and College Avenue. Agreement between the Town of Lewiston and Hooker Chemical and Plastics Corporation (January 19, 1981). This commitment ends when Hooker demonstrates it is safe to hook up these homes to the Town's sewer system. Hooker has also agreed with both Towns not to seek a reduction in the assessed value of any property it owns upon which remedial work is undertaken.

112. Comment: The high pressure air hose clean up of the culvert under Grief Brothers will not be effective. Letter from Lawrence Maillet (January 30, 1981); Comment of Lawrence Maillet at 130-1 (February 19, 1981 public hearing).
112. Response: The judgment of the Federal and State technical experts is that the clean up method specified the best techniques. The Settlement Agreement provides that if Bloody Run is capped, the pipe will be cleaned, plugged and sealed. If Bloody Run is excavated, the pipe will be cleaned. The pipe will be cleaned with a high pressure water jet followed by a sponge pig. The bedding material around the pipe both at the north and south end will be sealed. If the pipe is plugged, the drainage now flowing through this pipe will be diverted to a new drainage diversion, east of Penrose Street.
113. Comment: On p. I-23, why shouldn't the installation of a Bedrock Barrier Collection System be designed to collect liquids more than 15 feet below the top of the Lockport Bedrock Zone? There could be joints and fractures to a greater depth. Letter from J. Kieffer to Barbara Morrison (March 3, 1981), Attachment B of Ecumenical Task Force (March 1981).
113. Response: The piezometric head on the bedrock aquifer is above the top of the bedrock beneath the landfill. The installation of a collection system to contain a fifteen foot depth collects this bedrock contamination plus a margin of safety. Information presented in the literature concerning this area indicates that the major fractured zone of the Lockport Dolomite occurs at about fifteen feet. The design depth is also set to address the collection of contaminants that may have penetrated into this layer.
- Also, the Settlement Agreement requires Hooker to address through the use of Requisite Remedial Technology any contamination below 15 feet from the top of the Lockport Bedrock zone. Paragraph D(7)(b) of Addendum I.
114. Comment: On page 5 of the agreement, it states, "groundwater occurs in the Lockport Bedrock Zone, groundwater occurs in fractures or joints which are parallel to the bedding planes, in other fractures or joints which cut across the bedding planes approximately at right angles to the bedding and in cavities formed by the solution of minerals from the rock." With these "fractures and joints" and "by the solution of minerals from the rock", there is no assurance that there is no leakage of aqueous or non-aqueous liquids out of the bottom of the Hyde Park - Bloody Run area. There is no liner on the bottom of the site, and no wells removing seepage at the lower depths of Lockport Bedrock Zone nor from the Rochester Shale Zone. Letter from J. Kieffer to Barbara Morrison, (March 3, 1981), Attachment B of Comments Ecumenical Task Force (March 8, 1981).

114. Response: There is no evidence that there are chemicals from the landfill in the Rochester Shale Zone. In paragraph D sub-paragraph 5, Hooker will be required to determine and install Requisite Remedial Technology which will contain or clean up the off site chemicals at or above the action limits set out in Addendum I.

115. Comment: The distance between the purge wells of the Bedrock Barrier - Collection System is too great to assure that aqueous and non-aqueous liquids will not escape through the "fractures and joints" of the sides of the landfill site. On the west side, these wells are about 100 feet apart, Figures 11 and 12; on the north and south sides, they are about 200 feet apart as seen in Figures 7, 8, 9, and 10. Letter from J. Kieffer to Barbara Morrison (March 3, 1981) Attachment B of Comments of Ecumeniccal Task Force (March 1981).

115. Response: There are no distances between wells specified in the Settlement Agreement. The figures in the Settlement Agreement are only best estimates at this point in time. This is why the figures are captioned "conceptual plan view." See Figure 11. Hooker is required to submit all plans and specifications of their purge well system to EPA and the State for review prior to construction. It will be necessary at that time, for Hooker to demonstrate to EPA's and the State's satisfaction that the purge well system will operate as designed.

116. Comment: There are no treatment facilities planned for contaminated ground water. Letter from J. Kieffer to Barbara Morrison (March 3, 1981) Attachment B of Comments of Ecumenical Task Force (March 1981).

116. Response: Paragraph E(1) of Addendum I requires that aqueous phase liquids collected pursuant to Paragraphs A and D [this is contaminated groundwater] and aqueous phase liquids contained in the existing lagoons at the landfill site shall be transported to and treated in an activated carbon waste water treatment system. Also see the response to comment 53. Hooker has an existing activated carbon waste water treatment plant at its Niagara Falls plant. No specific requirement to build or buy a treatment facility is necessary.

117. Comment: The monitoring wells for the Overburden Barrier - Collection System and the Bedrock Barrier - Collection System, Figures 22, 23, and 24, are not placed close enough together to verify that the collection of liquids leaving the landfill has been achieved. "Fractures and joints" could exist between these sample wells through which these liquids could escape undetected. The "chemical loading" calculations would not detect these losses.

In Addendum II on p. II-2 under "Barrier-Collection System Monitoring", the criteria for determining the number of monitoring wells and piezometers should be specified. The numbers specified do not seem to be sufficient to monitor such a large landfill. Criteria for determining the location of these wells should also be specified.

There are no wells indicated for the Rochester Shale Zone and there should be.

On p. II-10, M, what is the criteria for determining the number "four" for the monitoring wells for the Bloody Run. It does not seem to be sufficient. In addition, why are not the Weathered Zone and the Overburden or Soil Zone monitored? Comments of J. Keifer (all relating to the number of monitoring or survey wells and the criteria for specify the number).

117. Response: The monitoring wells illustrated in figure 22 and 24 of the Settlement Agreement are existing monitoring wells. These wells, to date, have provided adequate data on ground-water contamination in both the overburden and bedrock aquifers. Additional wells are specified by the agreement. If during implementation of requisite remedial technology pursuant to the Settlement Agreement, it is determined that the number of monitoring wells is inadequate for the program, EPA and the State can require Hooker under Paragraph C(8) and C(9), Addendum I, to install additional monitoring wells to obtain the required data. In general, based on the data obtained in the initial survey and monitoring, further wells can and no doubt will be required, before a particular Requisite Remedial Technology is actually installed.

The wells in figure 23 will be utilized primarily for the verification of the effectiveness of the leachate collection system, as specified in Addendum I, paragraph C of the Settlement Agreement. In general, the criteria for selection of the number of general placement of wells is the best engineering judgment of the Federal and State technical team based on the interpretation of the data. Again it should be emphasized that precise details of location, and in the case of requisite remedial technology or where numbers are not specified in the agreement, the number of monitoring wells will be provided in plans and specifications. More wells can be required as needed. Also see responses to comments 121 and 122.

118. Comments: Why is there not a criteria for the TCP and HCB for the wash water also? Letter from I. Kieffer to Barbara Morrison (March 5, 1981) Attachment B of Comments of Ecumenical Task Force (March 1981).

118. Response: The Settlement Agreement, on page I-46, paragraph J(1) states that cleanup will continue until the TCP and HCB concentrations in the particulate portion of the wash water do not exceed 100 ppb. All the water so collected will be treated and disposed of as provided in Paragraph E of Addendum I and therefore the criteria for the carbon treatment will apply. Paragraph E provides that wastes (e.g. wash water) must be treated to 10 ppb for these chemicals. TCP is slightly soluble in water and HCB is insoluble in water, therefore one would not expect to detect HCB or TCP in the wash water above 10 ppb. Thus, it is impractical and not necessary to set criteria for these two chemicals in wash water, beyond what is already required in the Settlement Agreement.

119. Comment: There are no chemical loading studies specified for the Rochester Shale Zone. Letter from J. Kieffer to Barbara Morrison (March 5, 1981) Attachment B of Comments of Ecumenical Task Force (March 18, 1981).

119. Response: At the present time it is not known whether chemical have migrated to the top of the Rochester Shale Zone. Therefore, as part of the survey program, plume definition studies will be performed (Paragraph B) which will identify both the horizontal and vertical extent of aqueous and non aqueous phase chemicals (all the way down to the Rochester Shale Zone). Once the plumes have been defined, using chemicals and other parameters listed in paragraphs D & F, chemical loadings will be calculated. If, through this plume definition, contamination has been found in the Rochester Shale Zone, Hooker must, according to the Settlement Agreement, provide plans to deal with the contamination. In order to determine effectiveness of all Bedrock Barrier-Collection Systems (including those addressed by Requisite Remedial Technology), chemical loadings must be ascertained, whenever contamination has been found. Paragraphs H, I, V and J of Addendum II.
120. Comment: "Why is only particulate dispersion controlled and not vapors also? Letter from J. Kieffer to Barbara Morrison (March 3, 1981) Attachment B of Comments of Ecumenical Task Force (March 1981).
120. Response: Vapors are controlled under the Settlement Agreement, Page V-12 (Paragraph J) states that during construction activities Hooker shall continuously monitor for (1) organic vapors, (2) flammability, and (3) particulates. This paragraph also specifies, in J(1), the techniques and methods to be used and levels for trichloroethylene (100 ppb) and for benzene (10 ppm) that cannot be exceeded on site. If they are exceeded, construction activities must be suspended until corrective action has been effected. This will protect the workers and assure that volatiles above the action levels will not leave the site and migrate to the neighborhood.
121. Comment: The monitoring activities, the sampling procedures, and the analysis procedures are not specified and in subparagraph C(8)(f) of Addendum I are only stated to be under "Requisite Remedial Technology". Letter from J. Kieffer to Barbara Morrison (March 3, 1981) Attachment B of Comments of Ecumenical Task Force (March 1981).

121. Response: Specific monitoring activities are addressed throughout the Settlement Agreement and the Addenda. The analyses are addressed in Addendum I, paragraph E(2)(a) on Page I-26, and Addendum II, paragraphs F and G, pages II-4 and 5. Addendum I, paragraph G(1)(e), page I-40, provides that soil samples "shall be collected and analyzed for total tetra-chlorodibenzo-p-dioxins (TCDD) at a detection level achieved using generally accepted high resolution mass spectrometry TCDD analytical techniques." Other chemicals are listed with appropriate monitoring levels. These levels are based upon recognized gas chromatography - mass spectrometry (GC/MS) techniques. No other method is currently available for reaching these limits. By setting the limits as outlined, Hooker is required to use GC/MS or a better system if such evolves during the course of the containment and monitoring of the site. The plans, specifications, and protocols for every type of monitoring will be submitted to EPA and the State under Paragraph 7 after the Settlement Agreement is approved. As explained previously, it is neither feasible nor desirable to require all such details before lodging a consent judgment. See the response to comment 20.
122. Comment: On p. II-10, L., what is the criteria for stating that "five piezometers" is sufficient to check the whole landfill site? Five piezometers are not sufficient to monitor 15 acres for the water table. Also, there are no monitoring wells in the entire 15 acres. Kieffer Comments.
122. Response: During the course of the negotiations, EPA and the State determined that the number of piezometers are adequate to define the water table elevation at the site. It is the professional opinion of all parties involved that, based on current piezometer data, the number of piezometers required for this site will provide the necessary groundwater elevation data for the remedial program.

No monitoring wells are drilled directly into the site because we know that there are chemical wastes in the landfill, it is only outside the site that monitoring wells are necessary.

123. Comment: In Addendum I, p. I-6, why, in the identification of Swales Alpha and Beta, as shown on Figure 3, shall the excavation or sampling of soil more than five feet below ground level not be required, and in the identification of Swales Gamma and Delta, as shown on Figure 3, shall the excavation or sampling of soil deeper than one foot below the interface of fill material and the soil beneath it not be required? What is the basis of this criteria on the depth of the excavation? Letter from J. Keiffer to Barbara Morrison (March 3, 1981) Attachment B of Comments of Ecumenical Task Force (March 1981).

123. Response: The survey of the swale path is designed to determine the extent of surface migration through historic drainage ditches. As water flowed through the swales in the past, chemicals may have been deposited in the sediments on the bottom. The depths for excavation were determined from historical photographs and actual geologic data about the depths of the swales. The depths specified in the agreement encompass the area where chemicals are likely to be found, that is, the interface between the soil at the bottom of the swale and the fill material.

The areal and vertical survey required by paragraph C of Addendum I addresses possible migration below the depths specified for survey of surface contamination along the swales.

124. Comment: On page I-27, on the effluent samples, why is the pH treatment level so wide, 5 to 10? This could disrupt the operation of the publicly owned treatment plant that receives this waste. Letter from J. Keiffer to Barbara Morrison (March 3, 1981) Attachment B of Comments of the Ecumenical Task Force (March 1981).

124. Response: The pH levels used are those for the carbon treatment unit at Hooker's privately owned treatment facility. These limits were set by the State of New York. These limits do not address or apply to the publicly owned treatment plant.

EPA regulations require that the effluent discharged by publically owned waste water treatment plants into a navigable water have a pH between 6.0 and 9.0. (40 C.F.R. §133.102) EPA's pretreatment regulations also require that effluent discharged into a municipal waste water treatment plant not interfere with its operation. We do not believe that waste with a pH between 5 and 10 would disrupt the water treatment plant. It should be noted that when a permit is issued pursuant to 6 NYC RR Part 360, the pH limit will be reviewed. It can be changed, if it is determined that the pH will interfere with the plant.

125. Comment: On P. I-10, why is Hooker not required under this paragraph to submit to EPA any TOC and TOH data? Letter from J. Kieffer to Barbara Morrison (March 3, 1981) Attachment B on Comments of Ecumenical Task Force March 1981).
125. Response: EPA and the State believe that using specific chemical measurements are a better method than reliance on TOC and TOH to determine the extent of offsite migration of chemicals. EPA has not established a clean up level based on TOC and TOH (EPA RCRA regulations require monitoring of TOC and TOH to establish a background). The State of New York believes that the TOC and TOH levels in the Settlement Agreement provide additional information to use in defining the plume of chemicals from the Hyde Park landfill. While not disagreeing with that point, EPA has approximately 57 other hazardous waste cases, many of which involve groundwater contamination. In order to avoid in those other cases, the defendant arguing that the TOC and TOH definitions levels used in this Settlement Agreement are EPA established levels applicable in all situations, EPA insisted that the Settlement Agreement, on its face, indicate that EPA was not relying on those levels. It should be noted that the use of the TOC and TOH levels are in addition to the specific limits. As a practical matter EPA will probably receive the same data, including TOC and TOH data, from Hooker and will use that information in interpreting the data.
126. Comment: On p. I-15, what are the criteria for determining that three wells be installed to the top of the Rochester Shale Zone adjacent to the western boundary of the Landfill Site? On p. I-16, what are the criteria for determining the "appropriate number of observation wells" that shall be installed? When the extent of the plumes is being determined, why is the weathered zone not considered? Letter from J. Kieffer to Barbara Morrison (March 3, 1981) Attachment B to Comments of Ecumenical Task Force (March 1981).
126. Response: The purpose of these three wells is to gather detailed information on the aquifer characteristics of the entire bedrock system and determine if a purge well system in bedrock will work. The number of wells chosen is, in the professional opinion of EPA and the State, sufficient to provide the necessary information.

The appropriate number of observation wells will be dictated by the data gathered during the coring of the initial three wells. These cores, together with packer tests, will identify specific aquifer zones which should be observed during pump tests. The number and location of the observation wells shall be determined by Hooker, EPA and the State in the plans and specifications portion of the decree. Paragraph 7.

127. Comment: On p. I-28, it seems two consecutive weeks is too long to wait for Hooker to notify EPA/State when the effluent analysis reveals any parameter in excess of the treatment levels described in subparagraph 2(a). Letter from J. Kieffer to Barbara Morrison (March 3, 1981) Attachment B of Comments of Ecumenical Task Force (March 1981).

127. Response: The normal cycle time for analysis is one week from the date of collection. A minimum of two samples is required to give any indication of changes in the system other than those likely to be seen on a short term cycle.

128. Comment: On p. I-33, (8)(b), it does not seem reasonable to store additional liquids in the existing lagoons, when it has not been determined that they securely hold the liquids that they already contain.

On p. I-34, (ii) it does not seem that "four Overburden monitoring wells" is sufficient to monitor the tracer and seepage from the lagoon. Subparagraph (c) does not say anything about checking the seepage from the bottom of the lagoon. Letter from J. Kieffer to Barbara Morrison (March 3, 1981) Attachment B of Comments of Ecumenical Task Force.

128. Response: The use of those lagoons is temporary storage for materials collected by the leachate collection system. Any leakage will migrate back to the collection system for later treatment. However, the Settlement Agreement also provides for the use on a temporary basis of bulk containers. Paragraph E (8)(b) of Addendum I. Also, if after one year the lagoons are still in use, they must be checked for leakage. Paragraph E (8)(b). See the response to comment 99. The four monitoring wells are more than adequate to handle any leakage from the lagoons. The total area of the lagoons is less than a quarter of an acre. Leakage, if significant, will reach the wells and be detected. The purpose of this tracer system is not to contain leachate, but to detect possible leakage of leachate from the lagoon.

129. Comment: On p. I-40, (d), how will "a base layer of moisture sorbent material", be able to handle flows that may continue in the area? J. Kieffer Comment

129. Response: The purpose of the moisture sorbent mixture as a base layer in the capping of Bloody Run, is to help the forced removal of liquids from the "muck" material that will remain in the bottom of the Bloody Run channel after the diversion of Bloody Run. This initial layer of sorbent material will

absorb the remaining water in the creek channel, thus trapping it and any contaminants under the clay cap. The clay cap is designed to retard flows into the groundwater in and around the Bloody Run channel.

130. Comment: On p. II-4, (4), extra water table elevations or potentiometric surface measurements should be taken during extended rainy periods and during extended dry periods, in addition to the regularly scheduled readings, since different flow patterns can develop. J. Kieffer comments.
130. Response: Water table data taken prior to the existing remedial work shows that the water table evaluations do not fluctuate rapidly. A quarterly sample is adequate to follow trends and flow patterns in the area.
131. Comment: "Also, in P, for Hooker to wait 'four consecutive sampling periods' to advise EPA/State when 'chemicals migrating from the Bloody Run basin are observed at concentrations above the Bloody Run Monitoring Levels' is too long. It could be 1, 2, or 4 years, since sampling could be only once a year." J. Kieffer comment.
131. Response: Paragraph 13 of the Judgment requires Hooker to give all monitoring reports and other relevant information to EPA/State. Thus, we will be advised when the first sample shows chemicals migrating from the Bloody Run basin at concentrations in excess of the Bloody Run monitoring levels. Paragraph P, Addendum II requires Hooker to begin quarterly sampling at that time and to continue quarterly samples until all parameters fall below the monitoring levels for four consecutive quarterly samplings. Thus, four consecutive samples in excess of the monitoring levels, the number needed to trigger new remedial action, will be obtained within a nine month period, not four years as the commentor claims. During this nine month period no significant risk of harm will exist because of the minimal movement within the groundwater which will occur after stabilization.
132. Comment: On P. II, P, what is meant by the statement, "Such analysis shall take appropriate account of the impact on such measurements of the chemicals which were present in the area prior to completion of the Containment Program relating to Bloody Run." Does this relate to subtracting the background data? How will this be done? And, what are the background data? J. Kieffer Comments.

132. Response: The background data will be obtained in accordance with Addendum II, paragraph B(1). The purpose of the effectiveness criteria is to determine whether the remedial systems work, i.e., contain or clean up the groundwater. Since chemical-laden groundwater has migrated off site, the effectiveness test must ensure that it does not simply measure the existing offsite chemical-laden groundwater.
133. Comment: On p. I-50, could the "reopening" and "depositing" of "soils or other solid materials" cause a disturbance of the landfill site and cause new waste leakage problems? J. Kieffer Comments.
133. Response: To the greatest extent possible material will be disposed of in the toe, therefore not necessitating reopening the landfill. If it is necessary to re-open the landfill site, such action will be taken subject to review and approval of EPA and the State. It also must comply with the stringent health and safety requirements of Addendum V, which are designed to avoid any potential exposure to the public. Furthermore, Paragraph L of Addendum I provides for measures for final closure of the landfill which is intended to ensure the integrity of the remainder of the site. It is also important to note, that EPA/State, through review of the plans and specifications concerning reopening of the site, will require specific procedures to ensure that no new chemical migration programs occur.

CONCLUSION

In conclusion, the Federal and State governments believe that this Settlement Agreement serves the public interest by containing and cleaning up the chemicals that have migrated from the Hyde Park landfill. The public comment process has revealed several misconceptions concerning the Settlement Agreement.

This submission answers all of the questions contained in the public comments and resolves the issues raised. However, it should be noted that the foregoing responses merely summarize certain portions of the Settlement Agreement and are not intended to alter or modify any terms or conditions of that Agreement. We believe that this submission will be of assistance to the Court in reaching its decision.

Respectfully submitted,

UNITED STATES OF AMERICA

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Dated:

April 3, 1981

By:

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By:

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Dated:

April 3, 1981

53. Response: The frequency of sampling for the activated carbon waste treatment system is more than adequate for the reasons cited below. The Settlement Agreement requires Hooker to use three activated carbon beds - a dual bed in series and a backup (two is the normal configuration). The samples listed on I-27 are taken inbetween the first and second unit. The first unit is the unit which is treating the effluent and removing the chemicals. When the chemicals measured daily (p. I-27) exceed those limits, "break through" has occurred and the first unit is essentially used up. The carbon in unit one is replaced and the second unit becomes the first in series. Through this procedure one unit is always treating effluent. When break through occurs, the effluent is still treated by the second carbon unit and therefore the effluent being discharged is always at or below the limits listed on p. I-27. The third unit is available for emergencies.

Certain chemicals were chosen for daily measurement because they break through the quickest. The weekly, monthly, and semi-annual measurements are performed as a double check and to periodically determine what substances are being treated and how effectively.

54. Comment: The Judgment does not require the protection of or clean up of the Niagara River. Specifically, it does not provide for testing and decontaminating the portion of the river contaminated by the Hyde Park landfill. Letter from Fred Armagost 1-2 (January 28, 1981); Letter from Councilman William Heinz at 6 (February 18, 1981); Letter from Councilman Alvin Ogg at 7, 10 (February 21, 1981); Letter from C. Shonnard at 1 (Februry 24, 1981); Comments of Councilman Alvin Ogg at 63 (February 19, 1981 public meeting); Comments of Stanley Grossman at 66 (February 19, 1981 public hearing); Comment of Councilman William Heinz at 100 (February 19, 1981 public hearing).

54. Response: The best way to protect and clean up the Niagara River is to prevent chemical wastes from being discharged to it. A major element of the Settlement Agreement is directly aimed at achieving this goal. Paragraphs F-H of Addendum I require Bloody Run to be capped or excavated and as a result contamination which currently exists in the sediment will not be washed into the river. Paragraph I of Addendum I requires that the face of the Niagara Gorge be cleaned and all chemical-laden soil at the toe to be removed to prevent chemical residue from getting into the River. The other possible source of contamination of the Niagara River from the landfill is through the groundwater. Locating and cleaning up this contamination
- should restore*

is the major concern of the entire Settlement Agreement. If chemicals are entering the Niagara River through the groundwater, Hooker is required to address that problem with Requisite Remedial Technology. In most cases of contamination of river sediment, dredging, even if feasible, stirs up the chemicals and worsens the problem, e.g., the Kepone in the James River.

Concerning pollution of the Niagara River in general, the Canada/Ontario Review Board reported that "[i]n general, over the period 1975-1979, yearly average water quality conditions in the Niagara River met the objectives of the 1978 Canada/U.S. Great Lakes Water Quality Agreement and those of the Ontario Ministry of the Environment." Canada/Ontario Review Board, Executive Summary of Environmental Baseline Study of the Niagara River at 1 (1980), hereinafter "Canadian Baseline Study"). However, this report stated that the "major portion of the loading of PCB's and some pesticides enters the [Niagara] River adjacent to and downstream from Grand Island, New York ... Results of Analysis of suspended sediment samples indicated instances of high concentrations of PCB's and Hexachlorobenzenes (HCB's) 3 to 5 times the mean values detected." id., at 1. However, "[c]oncentrations of PCB's, total DDT and mercury have declined significantly since 1978 in spottail showers (an indicator forage fish species) caught at Niagara-on-the-Lake." id. at 2. All bottom sediment samples from the lower Niagara River and 83% of samples from the upper Niagara River had concentrations of PCB's greater than 50 ppb id. at 2. On January 29, 1981, the International Joint Commission proposed six recommendations to reduce the organic chemical loading in the Niagara River. Joint International Commission, On Pollution In the Niagara River 8-9 (1981). The United States has received an official Embassy Note concerning pollution of the Niagara River. Embassy Note No. 642. The Joint Commission was "pleased to note the announcement by United States Justice Department of the clean up the hazardous waste site of Hyde Park." id. at 4.

The best way to clean up the Niagara River is to decrease the discharges into the river from all sources. This Settlement Agreement begins that process. EPA and the State will be working together to continue that effort.

55. Comment: The liability and/or responsibility of Hooker should not be cut off after 35 years as required in Addendum III. Comments of Sierra Club et al. at G, paragraph 8; Letter from Councilman William Heinz at 5 (February 18, 1981); Comments of Citizens Alliance at 6 and 117 (February 19, 1981 public

Toby

M E M O R A N D U M

TO: Hooker File
FROM: Toby
DATE: 13 October 1981
RE: Response to Public Comments Document

Page 94: The comment by ETF was that all chemicals that would possibly be in the landfill must be sampled for, not just those few named in the agreement. The response was that measurements for each chemical is unnecessary and would simply delay the process because of the additional time needed for analysis.

This is just not the case as Dr. Hallett has testified. There is no delay and the cost would be the same to do a full spectrum test. Even testing for TCDD is possible and a pre-screen can be down with approximate a two day turn-around time.

Page 106: Comment 127: On page I-28 it seems two consecutive weeks is too long to wait for Hooker to notify EPA state when the effluent analysis reveals any parameter in excess of the treatment levels described in paragraph 2(a).

Response: The normal cycle time for analysis is one week from the date of collection. A minimum of two samples is required to give any indication of changes in the system other than those likely to be seen on a short term cycle.

Page 93: Comment 102: The use of TCP and HCB as surrogates was questioned. It was stated that it was valid only where firm experimental data indicate that there is a constant ratio of the surrogates to TCDD (ETF).

Response: The scientific reliability of the ratio is irrelevant because Hooker must confirm the outer boundary using actual dioxin measurements paragraph b(1)(c)(i) of Addendum I. The use of surrogate measures is helpful in that it speeds the determination of the perimeter boundary since the measurement of HCB and TCP are easier and quicker to perform. There is firm evidence both from the field measurements and from knowledge of the source of the dioxin, that these chemicals are appropriate as surrogates in this case. TCP is a very good surrogate because the source of dioxin is as an impurity in the manufacture of TCP. Therefore, TCP and dioxin were created together and disposed of at the same time. The field measurements confirm the ratio. Given the field measurements and the similarity of some of the physical characteristics HCB was also determined to be a good indicator of the presence of dioxin at the site.

Page 9
Response 114: There is no evidence that there are chemicals from the landfill in the Rochester Shale zone. In paragraph 4, sub-paragraph 5, Hooker will be required to determine and install RRT which will contain or clean-up the off-site chemicals at or above the action level set up in Addendum I.

Page 33: At Montague, the toxicity of the chemicals is less, particularly since there is no dioxin, and there was no landfill, but rather chemicals placed in various locations over large areas of the surface.

P. 62: Response⁵⁵ Hooker's liability is not automatically terminated after 35 years -(can get extension)

*Re exception to 35 year minimum: The only exception concerns operation of the barrier-collection systems, or components thereof, where the period may be shortened if it satisfies certain specified criteria.

^{p 56}
*Page 63: Response, the soil survey levels are based on the detection limits for these chemicals in soils.

^{Response # 79}
Page 77: Re Plume definition levels: The other chemical levels (besides dioxin) are approximately those levels which in EPA's experience are reliable detection levels regularly achieved by independent labs.

Page 96: Response 109: The Federal complaint contains the most recent and accurate list of the type and quantity of chemicals disposed of at the Hyde Park Landfill. See paragraph 18 of the Federal complaint. All measurements obtained to date are now publicly available.

Page 98: Comment 113. On page I-23, why shouldn't the installation of a Bedrock Barrier Collection System be designed to collect liquids more than 15 feet below the top of the Lockport Bedrock zone? There could be joints and fractures to a greater depth.

Response: The piezometric head on the bedrock aquifer is above the top of the bedrock beneath the landfill. The installation of a collection system to contain a 15 foot depth collects this bedrock contamination plus a margin of safety. Information presented in the literature concerning this area indicates that the major fractured zone of the Lockport Dolomite occurs at about fifteen feet. The design depth is also set to address the collection of contaminants that may have penetrated into this layer.

Also...RRT will take care of contamination below 15 feet from the top of the Lockport Bedrock zone.

Page 101: Comment 119 - There are no chemical loading studies specified for the Rochester Shale Zone.

Response: At the present time it is not known whether chemicals have migrated to the top of the Rochester Shale Zone. Therefore, as part of the survey program, plume definition studies will be performed (Paragraph B) which will identify both the horizontal and vertical extent of aqueous and non-aqueous phase chemicals (all the way down to the Rochester Shale Zone). Once the plumes have been defined, using chemicals and other parameters listed in paragraphs D & F, chemical loadings will be calculated. If, through this plume definition, contamination has been found in the Rochester Shale Zone, Hooker must, according to the Settlement Agreement, provide plans to deal with the contamination. In order to determine effectiveness of all Bedrock Barrier-Collection Systems (including those addressed by Requisite Remedial Technology), chemicals loadings must be ascertained, whenever contamination has been found. Paragraphs H, I, V and J. of Addendum II.