# EXPLANATION OF SIGNIFICANT DIFFERENCES
# CONKLIN DUMPS SITE

## TOWN OF CONKLIN, BROOME COUNTY, NEW YORK

## August 1992

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## APPENDICES

## 1.0 INTRODUCTION

In accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 117(c) and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan, if after the adoption of a final remedial action plan, such action differs in any significant respects from the final plan, an explanation of the significant differences and the reasons such changes were made must be published.

The March 1991 Record of Decision (ROD) for the Conklin Dumps site calls for, among other things, the capping of the Upper Landfill and the Lower Landfill in place and leachate collection and treatment. Since the signing of the ROD, however, the New York State Department of Environmental Conservation (NYSDEC), the lead agency for the project, the New York State Department of Health (NYSDOH), and the Environmental Protection Agency (EPA), the support agency for this project, have concluded that a more favorable remedy would be to excavate the Lower Landfill and consolidate the excavated material on top of the Upper Landfill, followed by capping of the Upper Landfill and leachate collection and treatment.

The ROD identifies and evaluates an alternative to consolidate the Lower Landfill on the Upper Landfill with the Upper Landfill being capped in accordance with 6 NYCRR Part 360 (Alternative No. 6). Alternative 6, summarized in this Explanation of Significant Differences, is described further in the remedial investigation and feasibility study (RI/FS) report prepared for this site.

Consolidation of the Lower Landfill on the Upper Landfill is strongly supported by the lead agency, the support agency, and the Town of Conklin (the owner of the landfill). Consolidation of the Lower Landfill on the Upper Landfill significantly changes but does not fundamentally alter the remedy selected in the ROD with respect to scope, performance, or cost. Consolidation employs the same remedial technologies to reduce the toxicity, mobility, and volume of contamination as the remedy selected in the ROD, *i.e.,* capping and leachate treatment.

This Explanation of Significant Differences will become part of the administrative record file for the Conklin Dumps site. The entire administrative record for the site, which also includes the RI Report, FS Report, ROD, Proposed Plan, and other reports related to the site, is available for public review at the following location:

Conklin Town Hall
1271 Conklin Road
Conklin, New York
Telephone: 607-775-3454
Hours: 9:00 am - 12:30 pm, 1:30 pm - 4:00 pm
Monday - Friday

The Administrative Record file is also available for public review at the EPA Region II office at the following location:

U.S. Environmental Protection Agency
26 Federal Plaza, Room 2900
New York, New York 10278
Hours: 9:00 am - 5:00 pm
Monday - Friday

## 2.0 PUBLIC PARTICIPATION ACTIVITIES

EPA and NYSDEC rely on public input to ensure that the concerns of the community are considered in selecting an effective remedy for each Superfund site. To this end, the draft Explanation of Significant Differences was made available to the public for a public comment period which began on June 22, 1992 and concluded on July 22, 1992. A public meeting was held during the public comment period on July 14, 1992 at the Conklin Town Hall to present the draft Explanation of Significant Differences to the public and to address any questions or concerns the public may have concerning the draft Explanation of Significant Differences and the proposed modified remedy. Comments received during the public comment period and their responses are included in the attached Responsiveness Summary.

## 3.0 SUMMARY OF SITE HISTORY, CONTAMINATION PROBLEMS, AND SELECTED REMEDY

The Conklin Dumps site consists of two landfilled areas totaling about 37 acres, referred to as the Upper and Lower Landfills (Figure 1). The Lower Landfill, which was operated between 1964 and 1969, contains approximately 33,000 cubic yards of wastes. It is believed that only municipal solid waste was disposed of in the Lower Landfill. The Upper Landfill contains approximately 72,000 cubic yards of waste. It is believed that some industrial wastes were co-disposed with municipal solid wastes in the Upper Landfill. The Landfills are owned and were operated by the Town of Conklin. In 1975, a closure order was issued by NYSDEC.

A two-phase hydrogeologic investigation was completed by O'Brien and Gere Engineers for the Broome County Industrial Development Agency in 1984 and 1985. Additional field work was performed in 1986, and in June 1986 the site was nominated for inclusion on the Superfund National Priorities List. In June 1987, a Consent Order was signed between the Town of Conklin and NYSDEC which required an RI/FS to be performed at the Conklin Dumps site. The Consent Order also required that the remedial measures selected in the ROD be implemented at the site.

The RI, which was completed in December 1988, indicated limited ground-water contamination in the immediate vicinity of the Upper Landfill. Confirmatory sampling, performed in June 1990, confirmed the RI findings and provided additional validated data.

The FS report was completed in January 1991. EPA, in consultation with NYSDEC, issued a Proposed Plan on February 3, 1991. A public comment period began on February 4, 1991 and extended until March 6, 1991. A public meeting was held at the Conklin Town Hall on February 25, 1991. A ROD, which was signed by the EPA Regional Administrator on March 29, 1991, called for, among other things, the capping of the Upper Landfill and the Lower Landfill in place and leachate collection and treatment. Comments received at the public meeting, as well as one written comment received during the comment period and the associated responses, are documented in the Responsiveness Summary (ROD Appendix 5).

## 4.0 DESCRIPTION OF SIGNIFICANT DIFFERENCES AND THE BASIS FOR THOSE DIFFERENCES

During preliminary design activities associated with the selected remedy, it was determined that the construction of a leachate collection trench and cap at the Lower Landfill would present significant engineering difficulties due to the proximity of an adjacent wetland and railroad tracks. In order to eliminate the leachate seeps at the Lower Landfill, it would be necessary to install a leachate-collection system below the water table. A leachate-collection system installed below the water table, however, would collect vast amounts of uncontaminated ground water and could adversely impact the adjacent wetland by dewatering a portion of it, unless hydraulic barriers are installed (which in itself could adversely impact the wetland). In addition, installing a cap on the Lower Landfill could negatively impact the adjacent wetland in that it would encroach on the wetland. Due to these technical feasibility and environmental concerns, a modified remedy consisting of the excavation of the Lower Landfill, consolidation of the excavated Lower Landfill contents onto the Upper Landfill, capping of the Upper Landfill, and construction of a leachate collection and treatment system is proposed.

The modified remedy, presented as Alternative 6 in the ROD, was screened out due to concerns related to Resource Conservative and Recovery Act (RCRA) Land Disposal Restrictions (LDRs). Upon further analysis of the RI data during pre-design activities, however, it has been determined that LDRs do not apply to the Lower Landfill, since there is no evidence to indicate that any waste other than municipal solid waste, as defined by 40 CFR Part 261.4 (b), is contained within the Lower Landfill. The Lower Landfill is believed to contain a heterogeneous mixture of approximately 33,000 cubic yards of municipal refuse with only low concentrations of hazardous substances typically associated with municipal refuse.

Table 1 provides a comparison of the results of the analysis of ground-water and leachate samples with both regulatory levels for determining toxicity characteristics using the Toxicity Characteristic Leaching Procedure (TCLP) as well as treatment standards expressed as Constituent Concentrations in Waste Extract (CCWE) from 40 CFR Part 268 Subpart D. All contaminants for which there is a corresponding TCLP or CCWE standard are one to five orders of magnitude below these standards. Though it is recognized that the TCLP provides a more aggressive leaching than natural leaching of precipitation through the solid waste, the wide disparity between the reported results with regulatory standards indicates that the waste may not be defined as a hazardous waste due to toxicity, and is, therefore, not subject to LDRs.

However, in order to be certain that RCRA Subtitle C is not relevant and appropriate, additional confirmatory sampling will be performed, with selected samples being analyzed for all toxic chemical constituents listed in 40 CFR Section 261.24.

If, during the excavation of the Lower Landfill, excavated wastes fail TCLP testing, which would preclude its placement on the Upper Landfill, this material would be sent to a RCRA-compliant treatment/disposal facility.

In order to assess the proposed modified remedy fully as it compares to the remedy selected in the ROD, an evaluation was performed of the proposed modified remedy utilizing the following criteria set forth in the October 1988, USEPA *Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA.*

## 4.1 Overall Protection of Human Health and the Environment

Placing a final cover on the Lower Landfill and providing a leachate-collection system would afford the same level of protection to public health as the modified remedy, since both remedies would prevent exposure to leachate seeps. The modified remedy, however, would be more protective of the environment than the selected remedy, since elimination of the leachate seeps at the Lower Landfill under the selected remedy would necessitate the installation of a leachate-collection system below the water table. Such an arrangement, however, would result in the collection of vast amounts of uncontaminated ground water, which could dewater a portion of the adjacent wetland.

## 4.2 Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

ARARs that apply to the remedy selected in the ROD and the proposed modified remedy include:

- New York State Class GA Ground Water Quality Standards (6 NYCRR Part 703);

- State Permit Discharge Elimination System Requirements (6 NYCRR Parts 750-758);

- New York State Ambient Water Quality Standards (6 NYCRR Part 701);

- National Ambient Air Quality Standards for Particulate Matter (40 CFR Part 50);

- Solid Waste Management Facilities Landfill Closure Criteria (6 NYCRR Part 360-2.15);

- Freshwater Wetlands Requirements (6 NYCRR Part 663); and

- Air Emissions Standards and Guidelines (6 NYCRR Part 212 and New York State Air Guide 1).

With the exception of air emissions regulations, the modified remedy would equal or exceed the selected remedy's ability to comply with ARARs. During excavation of the solid waste, short-term air emissions of particulates and volatiles could possibly occur. However, various engineering controls, such as dust suppressants and odor control measures, would be utilized, as necessary.

The selected remedy specifies a leachate-collection system to guard against the potential for future releases of hazardous substances. Consolidation of the Lower Landfill would simplify the leachate-collection system and improve the efficiency of contaminant removal. Similarly, the removal of the waste would prevent adverse impacts to the wetlands adjacent to the Lower Landfill through a means which would have little if any impact on the wetland. The proximity of the wetlands to the Lower Landfill would provide difficulties with the installation and operation of a leachate-collection system designed to prevent leachate infiltration into the wetlands. A leachate-collection system would invariably negatively impact the wetlands by dewatering a portion of it.

The closure and maintenance of a single landfill unit would facilitate compliance with New York State Solid Waste Management regulations. Though the basic components of the closure would be the same whether one or two landfills were closed, consolidation would decrease the total footprint or landfill area.

If, during the excavation of the Lower Landfill, any excavated wastes fail TCLP testing, which would preclude its placement on the Upper Landfill, this material would be sent to a RCRA-compliant treatment/disposal facility.

### 4.3 Long-Term Effectiveness and Permanence

Consolidating the waste from the Lower Landfill onto the Upper Landfill would have a greater degree of long-term effectiveness and permanence than if the wastes were

contained in two separate landfill units as is called for in the ROD. As discussed in the following section of this document, the hydrogeologic conditions at the Upper Landfill are better suited for effective leachate collection than at the Lower Landfill.

### 4.4 Reduction of Toxicity, Mobility, or Volume Through Treatment

The selected remedy and the modified remedy would both include the same methods for treatment of leachate. However, with the consolidation of all of the waste into one landfill unit, the amount of leachate generated would be reduced. The hydrogeologic conditions at the Upper Landfill are better suited for effective leachate collection than at the Lower Landfill. The Upper Landfill is underlain by a low permeability till layer which provides an effective means of containing leachate within the landfill. This is evident by the relatively low levels of contamination found in ground-water monitoring wells downgradient of the landfill. The Lower Landfill, on the other hand, is underlain by sand and gravel outwash. This sand and gravel layer, which is approximately 20 feet thick, is underlain by glacial till. Ground water occurs between 1 and 14 feet below the surface. As a result, in order to eliminate the leachate seeps at the Lower Landfill, it would be necessary to install a leachate-collection system below the water table which would result in the collection (and treatment) of vast amounts of uncontaminated ground water.

The modified remedy would not have a greater effect on the reduction of toxicity of the waste than the selected remedy, but it would reduce the mobility and volume of leachate by providing a more effective means of containing the waste and the leachate generated.

### 4.5 Short-Term Effectiveness

Although the municipal refuse in the Lower Landfill is 20 to 25 years old and may be fully decomposed, there could be adverse environmental impacts during excavation and transportation. Dust, odors, and volatile emissions would be monitored and controlled to protect the health and safety of workers and the community. As a result, the potential short-term impacts associated with the modified remedy would be greater than those posed by the selected remedy.

A contingency plan would be prepared during the remedial design phase to address any unexpected hazardous waste materials uncovered during the excavation of the Lower Landfill.

Engineering controls would be employed during implementation of the modified remedy to control air emissions and surface runoff.

## 4.6 Implementability

The ROD identifies the significant factors in assessing implementability as the following:

- the ability to construct and operate;
- the reliability of technologies;
- the ease of undertaking additional remedial action;
- the ability to monitor the effectiveness of each remedy;
- the ability to obtain necessary approvals from other agencies; and
- the availability of services, capacities, equipment, materials and specialists.

The construction of a leachate collection trench and cap at the Lower Landfill, as called for in the ROD would present significant engineering difficulties due to the proximity of the adjacent wetland and the railroad tracks. Hydraulic barriers would be necessary between the collection trench and the wetland to prevent adverse impacts to the wetland.

The modified remedy would require commonly available construction services, equipment and materials. It would provide a greater degree of reliability than the ROD remedy, since only a single landfill unit would require closure and operation and maintenance. Additionally, the amount of leachate requiring treatment would be less, allowing for a smaller and more automated treatment system.

## 4.7 Cost

The estimated costs for the selected remedy versus the modified remedy compare as follows:

| Remedy | Capital Cost | Annual Operation and Maintenance Cost | Present-Worth Cost |
|---|---|---|---|
| Selected Remedy | $3,277,132 | $93,180 | $4,709,542 |
| Modified Remedy | $3,245,425 | $72,764 | $4,363,990 |

The estimated costs for the selected remedy were adapted from the January 1991 FS report and the March 1991 ROD.

This comparison shows the estimated capital cost for the selected remedy and the modified remedy to be essentially equal (approximately 1 percent variation). Although it

may seem reasonable for the modified remedy to be less costly than the selected remedy since only one landfill would be capped (although it would be a slightly larger cap), the cost of excavation and consolidation of the lower Landfill would off-set any savings in capping costs. A detailed breakdown of the estimated cost is provided in Tables 2 and 3.

A greater variation exists in the comparison of annual operating and maintenance costs in which the estimated annual operation and maintenance costs for the modified remedy are approximately 22 percent less than the selected remedy. This is a result of lower requirements for operating and maintaining one landfill rather than two. This difference in operation and maintenance costs is further evident in the estimated present worth in which the annual operation and maintenance costs were taken for a period of 30 years at a 5 percent discount rate.

### 4.8 State Acceptance

NYSDEC, after careful consideration of the modified remedy, strongly supports consolidation of the Lower Landfill on the Upper Landfill, instead of implementing the remedy selected in the ROD. Based upon further analysis of the site during preliminary design activities, it appears that an effective landfill cap and leachate-collection system would be difficult to implement at the Lower Landfill. NYSDEC supports the modified remedy due to the environmental, public health, and technical advantages, and due to the fact that the modified remedy significantly changes but does not fundamentally alter the remedy selected in the ROD with respect to scope, performance, or cost. NYSDOH also supports on-site consolidation (see Appendix A).

### 4.9 Community Acceptance

No written comments pertaining to the modified remedy were received. Comments received at the public meeting and their responses are addressed in the attached Responsiveness Summary. The comments at the public meeting did not raise any substantial objections or concerns about the modified remedy. Therefore, EPA believes that the modified remedy has the support of the affected community.

## 5.0 AFFIRMATION OF STATUTORY DETERMINATIONS

The modified remedy, excavation of the Lower Landfill and consolidation of the excavated material on top of the Upper Landfill, followed by capping of the Upper Landfill and leachate collection and treatment, satisfies all statutory requirements. EPA, NYSDEC, and NYSDOH believe that the modified remedy is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant

and appropriate to this remedial action and is cost-effective. In addition, the modified remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this site.

Constantine Sidamon-Eristoff
Regional Administrator

9/3/97
Date

# EXPLANATION OF SIGNIFICANT DIFFERENCES
# CONKLIN DUMPS SITE

*FIGURES*

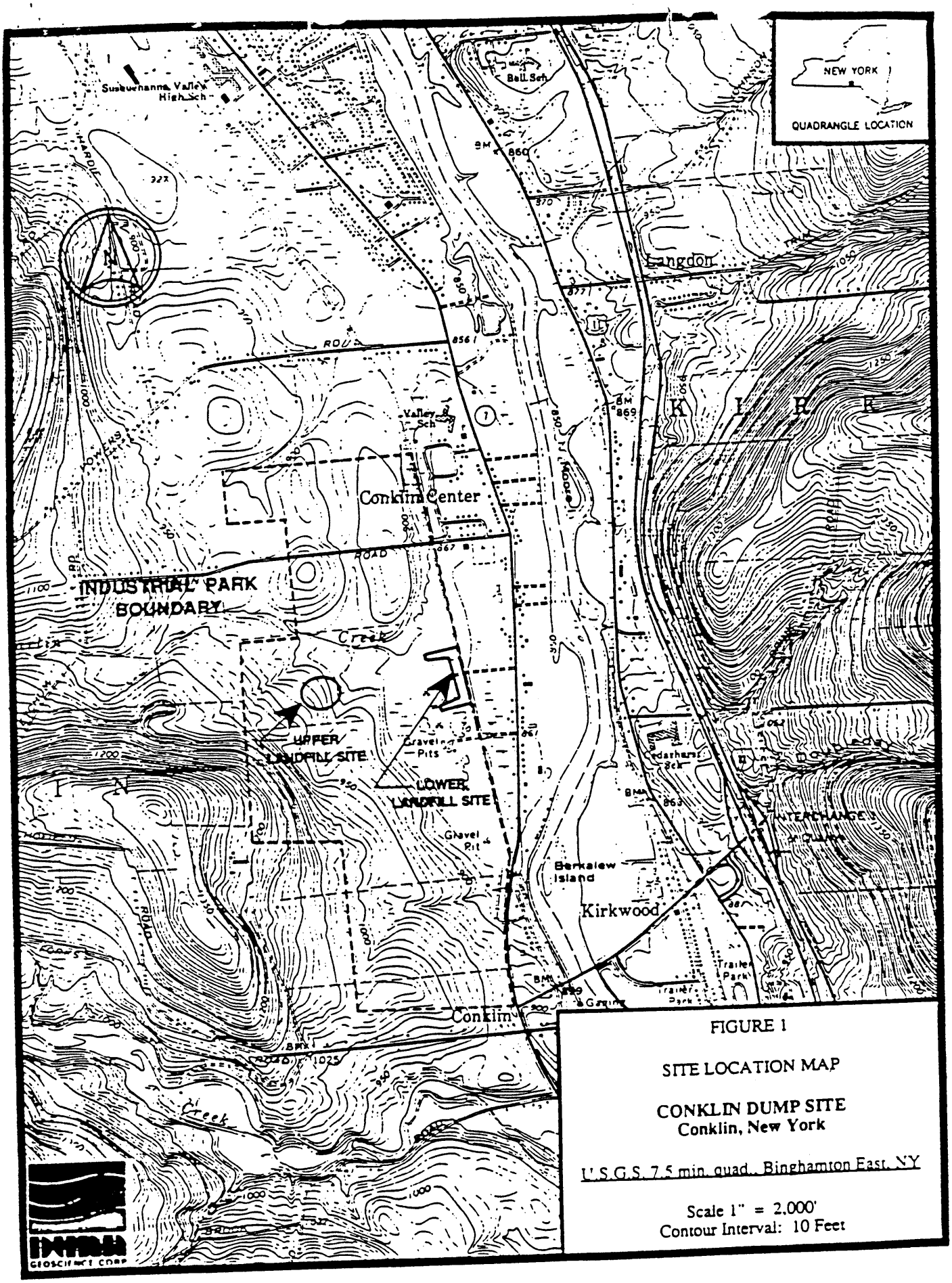


FIGURE 1

SITE LOCATION MAP

**CONKLIN DUMP SITE**
**Conklin, New York**

U.S.G.S. 7.5 min. quad., Binghamton East, N.Y.

Scale 1" = 2,000'
Contour Interval: 10 Feet

# EXPLANATION OF SIGNIFICANT DIFFERENCES
# CONKLIN DUMPS SITE

*TABLES*

# Table 1
## Conklin Lower Landfill
## Selected Analytical Parameters

| | Leachate | | | | Groundwater | | | | Treatment (1) Standards | TCLP (2) |
|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Date:** | 8/8/83 | | 8/20/83 | | 1/88 | | | | | |
| **Well Number:** | 13 | 15 | 13 | 15 | 6 | 7 | 8 | 18 | | |
| **Parameter** | | | | | | | | | | |
| Methylene Chloride | ND | 2 | 2 | 4 | ND | ND | ND | ND | 200 | |
| 1,1,1-Trichloroethane | 2 | ND | 2 | ND | ND | ND | ND | ND | 1,050 | |
| 1,2-Dichloropropane | ND | 45 | ND | 20 | ND | ND | ND | ND | | |
| Benzene | 2 | ND | ND | ND | ND | ND | ND | ND | | 500 |
| Toluene | 17 | ND | 13 | ND | ND | ND | ND | 2 | 1,120 | |
| Chlorobenzene | 2 | ND | 2 | ND | ND | ND | ND | ND | 150 | 100,000 |
| Ethylbenzene | 8 | ND | 5 | ND | ND | ND | ND | ND | 50 | |
| Arsenic | NA | NA | NA | NA | <10 | <10 | <10 | NA | | 5,000 |
| pH | 6.8 | 6.8 | 6.6 | - | 7.4 | 7.1 | 5.8 | 6.7 | | |

All values expressed as ug/L or ppb, except pH.
NA: Indicates no sample collected
ND: Not Dectectable
- : Indicates no sample taken.

(1) Values are Constituent Concentrations In Waste Extract (CCWE) from 40 CFR Part 268 Subpart D.
(2) Values are regulatory levels for defining characteristic hazardous waste using Toxicity Characteristics Leaching Procedure (40 CFR Part 261).

# TABLE 2

## Town of Conklin Landfill Site
## Cost Estimate - Selected Remedy
## Multi-Media Cap on Both Landfills, Leachate Management

**DIRECT CAPITAL COSTS**

| Item | Quantity | Units | Unit Cost | Total |
|---|---|---|---|---|
| **Site Preparation** | | | | |
| Clearing and Grubbing Landfill Area | 8.4 | Acres | $5,000 | $42,000 |
| Miscellaneous Grading | 30,000 | CY | $5 | $150,000 |
| **Cap Materials and Installation** | | | | |
| Buy/Haul/Place 1 ft. Gas Venting Layer | 13,600 | CY | $25 | $340,000 |
| Buy/Place 10 oz. Filter Fab. (beneath FML) | 384,000 | SF | $0.30 | $115,000 |
| Buy/Place 40 miL VLDPE FML | 384,000 | SF | $0.45 | $172,800 |
| Buy/Place 10 oz. Filter Fab. (over FML) | 384,000 | SF | $0.30 | $115,200 |
| Buy/Place Geogrids (Tensar UX1600) | 125,000 | SF | $1.05 | $131,250 |
| Buy/Place Filter Fabric Layer | 384,000 | SF | $0.30 | $115,200 |
| Buy/Haul/Place Barrier Protection Layer | 27,100 | CY | $12 | $325,200 |
| Buy/Haul/Place Topsoil | 6,800 | CY | $17 | $115,600 |
| Buy/Place Seed, Fertilizer, and Mulch | 40,700 | SY | $1 | $40,700 |
| Buy/Place Gas Vents | 13 | Each | $500 | $6,500 |
| Proof Rolling | 8.4 | Acres | $1,000 | $8,400 |
| Cap Quality Assurance/Quality Control | Lump Sum | Lump Sum | $150,000 | $150,000 |
| Buy/Build Leachate Trench Collect. System | Lump Sum | Lump Sum | Variable | $70,000 |
| Buy/Build Leachate Well Collection System | 90 | VF | $150 | $13,500 |
| Buy/Install Leachate Well Pumps/Controls | Lump Sum | Lump Sum | $5,000 | $5,000 |
| **Leachate Treatment System** | | | | |
| Buy/Install Equipment Building | Lump Sum | Lump Sum | $25,000 | $25,000 |
| Buy/Install Leachate Pretreatment System | Lump Sum | Lump Sum | $54,000 | $54,000 |
| Buy/Install Leachate Air Stripping System | Lump Sum | Lump Sum | $32,000 | $32,000 |
| Buy/Build Leachate Discharge Lines | 280 | LF | $8 | $2,240 |
| **Other Costs** | | | | |
| Site Fencing | 6,200 | LF | $10 | $62,000 |
| Miscellaneous Site Improvements | Lump Sum | Lump Sum | $31,000 | $31,000 |
| Safety Program | Lump Sum | Lump Sum | $56,500 | $56,500 |
| Dust Control | Lump Sum | Lump Sum | $10,000 | $10,000 |
| Off-Site Drainage Control | Lump Sum | Lump Sum | $5,000 | $5,000 |
| Equipment Decontamination | Lump Sum | Lump Sum | $6,000 | $12,000 |
| Mobilization/Demobilization | Lump Sum | Lump Sum | Variable | $54,000 |
| **Estimated Direct Capital Cost** | | | | $2,260,090 |
| **INDIRECT CAPITAL COSTS** | | | | |
| Contingency Allowance (25%) | | | | $565,023 |
| Engineering Fees (15%) | | | | $339,014 |
| Legal Fees (5%) | | | | $113,005 |
| **Estimated Indirect Capital Cost** | | | | $1,017,042 |
| **TOTAL ESTIMATED CAPITAL COST** | | | | $3,277,132 |

# TABLE 2

## Town of Conklin Landfill Site
## Cost Estimate - Selected Remedy
## Multi-Media Cap on Both Landfills, Leachate Management

**ANNUAL OPERATING AND MAINTENANCE COSTS**

| Item | Quantity | Units | Unit Cost | Total |
|---|---|---|---|---|
| Operate Leachate Treatment System | Lump Sum | Lump Sum | $1,800 | $1,800 |
| Leachate Treatment System Maintenance | 12 | mandays | $250 | $3,000 |
| Five-Year Review | Lump Sum | Lump Sum | $10,000 | $10,000 |
| Leachate Treatment Sample Analysis | 100 | samples | $110 | $11,000 |
| Groundwater Sampling | 8 | mandays | $350 | $2,800 |
| Sample Analysis | 24 | samples | $110 | $2,640 |
| Site Mowing | 26 | mandays | $250 | $6,500 |
| Site Inspection | 8 | mandays | $280 | $2,240 |
| Miscellaneous Site Work | 24 | mandays | $250 | $6,000 |
| Site Work Materials | Lump Sum | Lump Sum | $2,000 | $2,000 |
| Insurance @ 1% of Direct Capital Cost | Lump Sum | Lump Sum | Variable | $22,600 |
| Reserve Fund @ 1% of Direct Capital Cost | Lump Sum | Lump Sum | Variable | $22,600 |
| **Estimated Annual Operating and Maintenance Costs** | | | | $93,180 |
| **Present Worth of Annual Operating & Maintenance Cost** (@5%, 30 years) | | | | $1,432,410 |
| **TOTAL PRESENT WORTH** | | | | $4,709,542 |

# TABLE 3

## Town of Conklin Landfill Site
## Cost Estimate - Modified Remedy
## Consolidate Lower Landfill with Upper Landfill

**DIRECT CAPITAL COSTS**

| Item | Quantity | Units | Unit Cost | Total |
|---|---|---|---|---|
| **Site Preparation** | | | | |
| Clearing and Grubbing Landfill Area | 11 | Acres | $5,000 | $55,000 |
| Miscellaneous Site Grading | 35,500 | CY | $5.00 | $177,500 |
| **Consolidation of Lower Landfill to Upper Landfill** | | | | |
| Excavation of Lower Landfill | 34,360 | CY | $6.05 | $207,878 |
| TCLP Analysis of Residual Soil | 10 | Sample | $1,300.00 | $13,000 |
| Dewatering-Transport/Disposal | 200,000 | GAL | $0.35 | $70,000 |
| Haul Material to Upper Landfill | 34,360 | CY | $2.40 | $82,464 |
| Grading of Material at Upper Landfill | 34,360 | CY | $0.98 | $33,672 |
| Compaction of Material | 34,360 | CY | $0.91 | $32,177 |
| Buy/Haul/Place Daily Cover | 4,800 | CY | $10.00 | $48,000 |
| Buy/Haul/Place Fill at Lower Landfill | 18,000 | CY | $10.00 | $180,000 |
| **Cap Materials and Installation** | | | | |
| Buy/Haul/Place 1 ft. Gas Venting Layer | 9,680 | CY | $25.00 | $242,000 |
| Buy/Place 10 oz. Filter Fab. | 627,270 | SF | $0.30 | $188,181 |
| Buy/Place 40 miL HD Liner | 313,635 | SF | $0.45 | $87,504 |
| Buy/Haul/Place 24" Barrier Layer | 21,300 | CY | $12.00 | $255,600 |
| Buy/Haul/Place Topsoil 6" | 5,324 | CY | $17.00 | $90,508 |
| Buy/Place Seed, Fertilizer, and Mulch | 32,000 | SY | $1.00 | $32,000 |
| Buy/Place Gas Vents | 6 | Each | $500 | $3,000 |
| Proof Rolling | 6 | Acres | $1,000 | $6,000 |
| Cap Quality Assurance/Quality Control | Lump Sum | Lump Sum | $110,000 | $110,000 |
| Buy/Build Leachate Trench Collect. System | Lump Sum | Lump Sum | $70,000 | $70,000 |
| Buy/Install Leachate Well Pumps/Controls | Lump Sum | Lump Sum | $5,000 | $5,000 |
| **Leachate Treatment System** | | | | |
| Buy/Install Leachate Treatment System | Lump Sum | Lump Sum | $75,000 | $75,000 |
| Buy/Install Leachate Discharge Lines | 280 | LF | $8 | $2,240 |
| **Other Costs** | | | | |
| Site Fencing | 300 | LF | $10.00 | $3,000 |
| Miscellaneous Site Improvements | Lump Sum | Lump Sum | $31,000 | $31,000 |
| Safety Program | Lump Sum | Lump Sum | $56,500 | $56,500 |
| Dust Control | Lump Sum | Lump Sum | $10,000 | $10,000 |
| Off-Site Drainage Control | Lump Sum | Lump Sum | $5,000 | $5,000 |
| Equipment Decontamination | Lump Sum | Lump Sum | $6,000 | $12,000 |
| Mobilization/Demobilization | Lump Sum | Lump Sum | Variable | $54,000 |
| | **Estimated Direct Capital Cost** | | | **$2,238,224** |

# TABLE 3

## Town of Conklin Landfill Site
## Cost Estimate - Modified Remedy
## Consolidate Lower Landfill with Upper Landfill

**DIRECT CAPITAL COSTS**

| Item | Quantity | Units | Unit Cost | Total |
|---|---|---|---|---|
| **INDIRECT CAPITAL COSTS** | | | | |
| Contingency Allowance (25%) | | | | $559,556 |
| Engineering Fees (15%) | | | | $335,734 |
| Legal Fees (5%) | | | | $111,911 |
| | **Estimated Indirect Capital Cost** | | | **$1,007,201** |
| | **TOTAL ESTIMATED CAPITAL COST** | | | **$3,245,425** |
| **Annual Operating and Maintenance Costs** | | | | |
| Operate Leachate Treatment System | Lump Sum | Lump Sum | $2,000 | $2,000 |
| Leachate Treatment System Maintenance | 52 | Mandays | $100 | $5,200 |
| Leachate Treatment Sample Analysis | 40 | Samples | $200 | $8,000 |
| Groundwater Sampling | 8 | Mandays | $100 | $800 |
| Groundwater Sample Analysis | 28 | Samples | $200 | $5,600 |
| Site Mowing | 10 | Mandays | $100 | $1,000 |
| Site Inspection | 4 | Mandays | $100 | $400 |
| Cover Maintenance/Repairs | Lump Sum | Lump Sum | $5,000 | $5,000 |
| Insurance @ 1% of Direct Capital Cost | Lump Sum | Lump Sum | Variable | $22,382 |
| Reserve Fund @ 1% of Direct Capital Cost | Lump Sum | Lump Sum | Variable | $22,382 |
| | **Estimated Annual Operating and Maintenance Costs** | | | **$72,764** |
| | **Present Worth of Annual Operating and Maintenance Cost (@ 5%, 30 years)** | | | **$1,118,565** |
| | **TOTAL PRESENT WORTH** | | | **$4,363,990** |

# EXPLANATION OF SIGNIFICANT DIFFERENCES
# CONKLIN DUMPS SITE

*APPENDIX A*
*RESPONSIVENESS SUMMARY*

RESPONSIVENESS SUMMARY
DRAFT EXPLANATION OF SIGNIFICANT DIFFERENCES
CONKLIN DUMPS SITE
TOWN OF CONKLIN, BROOME COUNTY, NEW YORK

The Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC) rely on public input to ensure that the concerns of the community are considered in selecting an effective remedy for each Superfund site. To this end, the draft Explanation of Significant Differences was made available to the public for a public comment period which began on June 22, 1992 and concluded on July 22, 1992. A public meeting was held during the public comment period on July 14, 1992 at the Conklin Town Hall to present the draft Explanation of Significant Differences to the public and to address any questions or concerns the public may have concerning the draft Explanation of Significant Differences and the proposed modified remedy.

No written comments pertaining to the modified remedy were received. The comments at the public meeting did not raise any substantial objections or concerns about the modified remedy. Therefore, EPA and NYSDEC believe that the modified remedy has the support of the affected community.

Comments pertaining to the modified remedy that were received at the public meeting and their responses are summarized below by specific topic.

## EXCAVATING THE LOWER LANDFILL

Comment: One commenter questioned the wisdom of disturbing the Lower Landfill if its only filled with municipal refuse.

Response: Since there are leachate seeps on the Lower Landfill, the 1991 Record of Decision called for capping and leachate collection at this landfill. During preliminary design activities associated with the selected remedy, however, it was determined that the construction of a leachate collection trench and cap at the Lower Landfill would present significant engineering difficulties due to the proximity of an adjacent wetland and railroad tracks. In order to eliminate the leachate seeps at the Lower Landfill, it would be necessary to install a leachate-collection system below the water table. A leachate-collection system installed below the water table, however, would collect vast amounts of uncontaminated ground water and could adversely impact the adjacent wetland by dewatering a portion of it, unless hydraulic barriers are installed (which in itself could adversely impact the wetland). In addition, installing a cap on the Lower Landfill could negatively impact the adjacent wetland in that it would encroach on the wetland. Due to these technical feasibility and environmental concerns, a modified remedy consisting of the excavation of the Lower Landfill, consolidation of the excavated Lower Landfill contents onto the Upper Landfill, capping of the Upper Landfill, and construction of a leachate collection and treatment system, is proposed.

## DEFINITION OF WASTES

Comment: One commenter expressed confusion between hazardous wastes and municipal wastes.

Response: Hazardous wastes are, in general, waste products associated with industrial processes, such as spent solvents. Municipal wastes are, in general, residential and commercial establishments' refuse. Residential and commercial establishments' refuse, however, often contain low concentrations of hazardous chemicals (*e.g.,* paints, cleaning solutions, insecticides and herbicides).

Dumps site. The Consent Order also required that the remedial measures selected in the ROD be implemented at the site.

The RI, which was completed in December 1988, indicated limited ground-water contamination in the immediate vicinity of the Upper Landfill. Confirmatory sampling, performed in June 1990, confirmed the RI findings and provided additional validated data.
The FS report was completed in January 1991. EPA, in consultation with NYSDEC, issued a Proposed Plan on February 3, 1991. A public comment period began on February 4, 1991 and extended until March 6, 1991. A public meeting was held at the Conklin Town Hall on February 25, 1991. A ROD, which was signed by the EPA Regional Administrator on March 29, 1991, called for, among other things, the capping of the Upper Landfill and the Lower Landfill in-place and leachate collection and treatment. Comments received at the public meeting, as well as one written comment received during the comment period and the associated responses, are documented the Responsiveness Summary (ROD Appendix 5).

## 3.0 DESCRIPTION OF SIGNIFICANT DIFFERENCES AND THE BASIS FOR THOSE DIFFERENCES

During preliminary design activities associated with the selected remedy, it was determined that the construction of a leachate collection trench and cap at the Lower Landfill would present significant engineering difficulties due to the proximity of an adjacent wetland and railroad tracks. In order to eliminate the leachate seeps at the Lower Landfill, it would be necessary to install a leachate collection system below the water table. A leachate collection system installed below the water table, however, would collect vast amounts of uncontaminated ground water and could adversely impact the adjacent wetland by dewatering a portion of it, unless hydraulic barriers are installed (which in itself could adversely impact the wetland). In addition, installing a cap on the Lower Landfill could negatively impact the adjacent wetland in that it would encroach on the wetland. Due to these technical feasibility and environmental concerns, a modified remedy consisting of the excavation of the Lower Landfill, consolidation of the excavated Lower Landfill contents onto the Upper Landfill, capping of the Upper Landfill, and construction of a leachate collection and treatment system, is proposed.

The proposed, modified remedy, presented as Alternative 6 in the ROD, was screened out due to concerns related to Resource Conservative and Recovery Act (RCRA) Land Disposal Restrictions (LDRs). Upon further analysis of the RI data during pre-design activities, however, it has been determined that LDRs do not apply to the Lower Landfill, since there is no evidence to indicate that any waste other than municipal solid waste, as defined by 40 CFR Part 261.4 (b), is contained within the Lower Landfill. The Lower Landfill is believed to contain a heterogenous mixture of approximately 33,000 cubic yards of municipal refuse with only low concentrations of hazardous substances typically associated with municipal refuse.

Table 1 provides a comparison of the results of the analysis of ground-water and leachate samples with both regulatory levels for determining toxicity characteristics using the Toxicity Characteristic Leaching Procedure (TCLP) as well as treatment standards expressed as Constituent Concentrations in Waste Extract (CCWE) from 40 CFR Part 268 Subpart D. All contaminants for which there is a corresponding TCLP or CCWE standard are one to five orders of magnitude below these standards. Though it is recognized that the TCLP provides a more aggressive leaching than natural leaching of precipitation through the solid waste, the wide disparity between the reported results with regulatory standards indicates that the waste may not be defined as a hazardous waste due to toxicity, and is, therefore, not subject to LDRs.

However, in order to be certain that RCRA Subtitle C is not relevant and appropriate, additional confirmatory sampling will be performed, with selected samples being analyzed for all toxic chemical constituents listed in 40 CFR Section 261.24.

If, during the excavation of the Lower Landfill, excavated wastes fail TCLP testing, which would preclude its placement on the Upper Landfill, this material would be sent to a RCRA-compliant treatment/disposal facility.

In order to assess the proposed modified remedy fully as it compares to the remedy selected in the ROD, an evaluation was performed of the proposed modified remedy utilizing the following criteria set forth in the October 1988, USEPA *Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA.*

### 3.1 Overall Protection of Human Health and the Environment

Placing a final cover on the Lower Landfill and providing a leachate collection system would afford the same level of protection to public health as the modified remedy, since both remedies would prevent exposure to leachate seeps. The modified remedy, however, would be more protective of the environment than the selected remedy, since elimination of the leachate seeps at the Lower Landfill under the selected remedy would necessitate the installa-

tion of a leachate collection system below the water table. Such an arrangement, however, would result in the collection of vast amounts of uncontaminated ground water, which could dewater a portion of the adjacent wetland.

### 3.2 Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

ARARs that apply to the remedy selected in the ROD and the proposed modified remedy include:

- New York State Class GA Ground Water Quality Standards (6 NYCRR Part 703)
- SPDES Requirements (6 NYCRR Parts 750-758)
- New York State Ambient Water Quality Standards (6 NYCRR Part 701)
- NAAQS for Particulate Matter (40 CFR Part 50)
- Solid Waste Management Facilities Landfill Closure Criteria (6 NYCRR Part 360-2.15)
- Freshwater Wetlands Requirements (6 NYCRR Part 663)
- Air Emissions Standards and Guidelines (6 NYCRR Part 212 and NYS Air Guide 1)

With the exception of air emissions regulations, the modified remedy would equal or exceed the selected remedy's ability to comply with ARARs. During excavation of the solid waste, short-term air emissions of particulates and volatiles could possibly occur. However, various engineering controls, such as dust suppressants and odor control measures, would be utilized, as necessary.

The selected remedy specifies a leachate-collection system to guard against the potential for future releases of hazardous substances. Consolidation of the Lower Landfill would simplify the leachate collection system and improve the efficiency of contaminant removal. Similarly, the removal of the waste would prevent adverse impacts to the wetlands adjacent to the Lower Landfill through a means which would have little if any impact on the wetland. The proximity of the wetlands to the Lower Landfill would provide difficulties with the installation and operation of a leachate-collection system designed to prevent leachate infiltration into the wetlands. A leachate-collection system would invariably negatively impact the wetlands by dewatering a portion of it.

The closure and maintenance of a single landfill unit would facilitate compliance with New York State Solid Waste Management regulations. Though the basic components of the closure would be the same whether one or two landfills were closed, consolidation would decrease the total footprint or landfill area.

If, during the excavation of the Lower Landfill, any excavated wastes fail TCLP testing, which would preclude its placement on the Upper Landfill, this material would be sent to a RCRA-compliant treatment/disposal facility.

### 3.3 Long-Term Effectiveness and Permanence

Consolidating the waste from the Lower Landfill onto the Upper Landfill would have a greater degree of long-term effectiveness and permanence than if the wastes were contained in two separate landfill units as is called for in the ROD. As discussed in the following section of this document, the hydrogeologic conditions at the Upper Landfill are better suited for effective leachate collection than at the Lower Landfill.

### 3.4 Reduction of Toxicity, Mobility, or Volume Through Treatment

The selected remedy and the modified remedy would both include the same methods for treatment of leachate. However, with the consolidation of all of the waste into one landfill unit, the amount of leachate generated would be reduced. The hydrogeologic conditions at the Upper Landfill are better suited for effective leachate collection than at the Lower Landfill. The Upper Landfill is underlain by a low permeability till layer which provides an effective means of containing leachate within the landfill. This is evident by the relatively low levels of contamination found in ground-water monitoring wells downgradient of the landfill. The Lower Landfill, on the other hand, is underlain by sand and gravel outwash. This sand and gravel layer, which is approximately 20 feet thick, is underlain by glacial till. Ground water occurs between 1 and 14 feet below the surface. As a result, in order to eliminate the leachate seeps at the Lower Landfill, it would be necessary to install a leachate collection system below the water table which would result in the collection (and treatment) of vast amounts of uncontaminated ground water.

The modified remedy would not have a greater effect on the reduction of toxicity of the waste than the selected remedy, but it would reduce the mobility and volume of leachate by providing a more effective means of containing the waste and the leachate generated.

### 3.5 Short-Term Effectiveness

Although the municipal refuse in the Lower Landfill is 20 to 25 years old and may be fully decomposed, there could be adverse environmental impacts during excavation and transportation. Dust, odors, and volatile emissions would be monitored and controlled to protect the health and safety of workers and the community. As a result, the potential short-term impacts associated with the modified remedy would be greater than those posed by the selected remedy.

A contingency plan would be prepared during the remedial design phase to address any unexpected hazardous waste materials uncovered during the excavation of the Lower Landfill.

Engineering controls would be employed during implementation of the modified remedy to control air emissions and surface runoff.

### 3.6 Implementability

The ROD identifies the significant factors in assessing implementability as the following:

- the ability to construct and operate;
- the reliability of technologies;
- the ease of undertaking additional remedial action;
- the ability to monitor the effectiveness of each remedy;
- the ability to obtain necessary approvals from other agencies; and
- the availability of services, capacities, equipment, materials and specialists.

The construction of a leachate-collection trench and cap at the Lower Landfill, as called for in the ROD would present significant engineering difficulties due to the proximity of the adjacent wetland and the railroad tracks. Hydraulic barriers would be necessary between the collection trench and the wetland to prevent adverse impacts to the wetland.

The proposed, modified remedy would require commonly available construction services, equipment and materials. It would provide a greater degree of reliability then the ROD remedy, since only a single landfill unit would require closure and operation and maintenance. Additionally, the amount of leachate requiring treatment would be less, allowing for a smaller and more automated treatment system.

### 3.7 Cost

The estimated costs for the selected proposed remedy versus the proposed modified remedy compare as follows:

| Remedy | Capital Cost | Annual O&M Cost | Present-Worth Cost |
|---|---|---|---|
| Selected Remedy | $3,277,132 | $93,180 | $4,709,542 |
| Modified Remedy | $3,245,425 | $72,764 | $4,363,990 |

The estimated costs for the selected remedy were adapted from the January 1991 FS report and the March 1991 ROD.

This comparison shows the estimated capital cost for the selected remedy and the modified remedy to be essentially equal (approximately 1 percent variation). Although it may seen reasonable for the modified remedy to be less costly than the selected remedy since only one landfill would be capped (although it would be a slightly larger cap), the cost of excavation and consolidation of the lower Landfill would off-set any savings in capping costs. A detailed breakdown of the estimated cost is provided in Tables 2 and 3.

A greater variation exists in the comparison of annual operating and maintenance costs in which the estimated annual operation and maintenance costs for the modified remedy are approximately 22 percent less than the selected remedy. This is a result of lower requirements for operating and maintaining one landfill rather than two. This difference in operation and maintenance costs is further evident in the estimated present worth in which the annual operation and maintenance costs were taken for a period of 30 years at a 5 percent discount rate.

### 3.8 State Acceptance

NYSDEC, after careful consideration of the proposed, modified remedy, strongly supports consolidation of the Lower Landfill on the Upper Landfill, instead of implementing the remedy selected in the ROD. Based upon further analysis of the site during preliminary design activities, it appears that an effective landfill cap and leachate collection system would be difficult to implement at the Lower Landfill. NYSDEC supports the modified remedy due to the environmental, public health, and technical advantages, and due to the fact that the modified remedy significantly changes but does not fundamentally alter the remedy selected in the ROD with respect to scope, perfor-

mance, or cost. NYSDOH also suppoı ın-site consolidation (see Appendix A).

### 3.9 Community Acceptance

Based on public response to the draft Explanation of Significant Differences, an assessment of community acceptance will be incorporated into the final Explanation of Significant Differences.

## 4.0 AFFIRMATION OF STATUTORY DETERMINATIONS

The modified remedy, excavation of the Lower Landfill and consolidation of the excavated material on top of the Upper Landfill, followed by capping of the Upper Landfill and leachate collection and treatment, satisfies all statutory requirements. EPA, NYSDEC, and NYSDOH believe that the modified remedy is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to this remedial action and is cost-effective. In addition, the modified remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable for this site.

## 5.0 PUBLIC PARTICIPATION ACTIVITIES

EPA and NYSDEC rely on public input to ensure that the concerns of the community are considered in selecting an effective remedy for each Superfund site. To this end, the draft Explanation of Significant Differences is being made available to the public for a public comment period which begins on June 22, 1992 and concludes on July 22, 1992. A public meeting will be held during the public comment period on July 14, 1992, at 7:30 P.M., at the Conklin Town Hall to present the draft Explanation of Significant Differences to the public and to address any questions or concerns the public may have concerning the draft Explanation of Significant Differences and the proposed modified remedy. Any oral comments which are presented at the public meeting or any written comments which are submitted during the public comment period shall be limited to issues concerning the proposed consolidation of the two landfills.

Comments received at the public meeting, as well as written comments received during the public comment period, will be documented in the Responsiveness Summary Section of the final Explanation of Significant Differences.

All written commeı. should be addressed to:

Brian Davidson
Project Manager
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-7010

The complete administrative record is available for public review at Conklin Town Hall, 1271 Conklin Road, Conklin, New York, the NYSDEC, 50 Wolf Road, Albany, New York and the EPA, Region II Office in New York City. Documents are also available for public review at the NYSDEC office in Kirkwood, New York.

# Table 1
## Conklin Lower Landfill
## Selected Analytical Parameters

| | Leachate | | | | Groundwater | | | | Treatment (1) Standards | TCLP (2) |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date: | 8/8/83 | | 8/20/83 | | 1/88 | | | | | |
| Well Number: | 13 | 15 | 13 | 15 | 6 | 7 | 8 | 18 | | |
| **Parameter** | | | | | | | | | | |
| Methylene Chloride | ND | 2 | 2 | 4 | ND | ND | ND | ND | 200 | |
| 1,1,1-Trichloroethane | 2 | ND | 2 | ND | ND | ND | ND | ND | 1,050 | |
| 1,2-Dichloropropane | ND | 45 | ND | 20 | ND | ND | ND | ND | | 500 |
| Benzene | 2 | ND | ND | ND | ND | ND | ND | ND | | |
| Toluene | 17 | ND | 13 | ND | ND | ND | ND | 2 | 1,120 | |
| Chlorobenzene | 2 | ND | 2 | ND | ND | ND | ND | ND | 150 | 100,000 |
| Ethylbenzene | 8 | ND | 5 | ND | ND | ND | ND | ND | 50 | |
| Arsenic | NA | NA | NA | NA | <10 | <10 | <10 | NA | | 5,000 |
| pH | 6.8 | 6.8 | 6.6 | - | 7.4 | 7.1 | 5.8 | 6.7 | | |

All values expressed as ug/L or ppb, except pH.
NA: Indicates no sample collected
ND: Not Dectectable
- : Indicates no sample taken.

(1) Values are Constituent Concentrations In Waste Extract (CCWE) from 40 CFR Part 268 Subpart D.
(2) Values are regulatory levels for defining characteristic hazardous waste using Toxicity Characteristics Leaching Procedure (40 CFR Part 261).

# TABLE 2

## Town of Conklin Landfill Site
## Cost Estimate - Selected Remedy
## Multi-Media Cap on Both Landfills, Leachate Management

| DIRECT CAPITAL COSTS Item | Quantity | Units | Unit Cost | Total |
|---|---|---|---|---|
| **Site Preparation** | | | | |
| Clearing and Grubbing Landfill Area | 8.4 | Acres | $5,000 | $42,000 |
| Miscellaneous Grading | 30,000 | CY | $5 | $150,000 |
| **Cap Materials and Installation** | | | | |
| Buy/Haul/Place 1 ft. Gas Venting Layer | 13,600 | CY | $25 | $340,000 |
| Buy/Place 10 oz. Filter Fab. (beneath FML) | 384,000 | SF | $0.30 | $115,000 |
| Buy/Place 40 mil VLDPE FML | 384,000 | SF | $0.45 | $172,800 |
| Buy/Place 10 oz. Filter Fab. (over FML) | 384,000 | SF | $0.30 | $115,200 |
| Buy/Place Geogrids (Tensar UX1600) | 125,000 | SF | $1.05 | $131,250 |
| Buy/Place Filter Fabric Layer | 384,000 | SF | $0.30 | $115,200 |
| Buy/Haul/Place Barrier Protection Layer | 27,100 | CY | $12 | $325,200 |
| Buy/Haul/Place Topsoil | 6,800 | CY | $17 | $115,600 |
| Buy/Place Seed, Fertilizer, and Mulch | 40,700 | SY | $1 | $40,700 |
| Buy/Place Gas Vents | 13 | Each | $500 | $6,500 |
| Proof Rolling | 8.4 | Acres | $1,000 | $8,400 |
| Cap Quality Assurance/Quality Control | Lump Sum | Lump Sum | $150,000 | $150,000 |
| Buy/Build Leachate Trench Collect. System | Lump Sum | Lump Sum | Variable | $70,000 |
| Buy/Build Leachate Well Collection System | 90 | VF | $150 | $13,500 |
| Buy/Install Leachate Well Pumps/Controls | Lump Sum | Lump Sum | $5,000 | $5,000 |
| **Leachate Treatment System** | | | | |
| Buy/Install Equipment Building | Lump Sum | Lump Sum | $25,000 | $25,000 |
| Buy/Install Leachate Pretreatment System | Lump Sum | Lump Sum | $54,000 | $54,000 |
| Buy/Install Leachate Air Stripping System | Lump Sum | Lump Sum | $32,000 | $32,000 |
| Buy/Build Leachate Discharge Lines | 280 | LF | $8 | $2,240 |
| **Other Costs** | | | | |
| Site Fencing | 6,200 | LF | $10 | $62,000 |
| Miscellaneous Site Improvements | Lump Sum | Lump Sum | $31,000 | $31,000 |
| Safety Program | Lump Sum | Lump Sum | $56,500 | $56,500 |
| Dust Control | Lump Sum | Lump Sum | $10,000 | $10,000 |
| Off-Site Drainage Control | Lump Sum | Lump Sum | $5,000 | $5,000 |
| Equipment Decontamination | Lump Sum | Lump Sum | $6,000 | $12,000 |
| Mobilization/Demobilization | Lump Sum | Lump Sum | Variable | $54,000 |
| **Estimated Direct Capital Cost** | | | | $2,260,090 |
| **INDIRECT CAPITAL COSTS** | | | | |
| Contingency Allowance (25%) | | | | $565,023 |
| Engineering Fees (15%) | | | | $339,014 |
| Legal Fees (5%) | | | | $113,005 |
| **Estimated Indirect Capital Cost** | | | | $1,017,042 |
| **TOTAL ESTIMATED CAPITAL COST** | | | | $3,277,132 |

3/27/92

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# TABLE 2

## Town of Conklin Landfill Site
## Cost Estimate - Selected Remedy
## Multi-Media Cap on Both Landfills, Leachate Management

| ANNUAL OPERATING AND MAINTENANCE COSTS Item | Quantity | Units | Unit Cost | Total |
|---|---|---|---|---|
| Operate Leachate Treatment System | Lump Sum | Lump Sum | $1,800 | $1,800 |
| Leachate Treatment System Maintenance | 12 | mandays | $250 | $3,000 |
| Five-Year Review | Lump Sum | Lump Sum | $10,000 | $10,000 |
| Leachate Treatment Sample Analysis | 100 | samples | $110 | $11,000 |
| Groundwater Sampling | 8 | mandays | $350 | $2,800 |
| Sample Analysis | 24 | samples | $110 | $2,640 |
| Site Mowing | 26 | mandays | $250 | $6,500 |
| Site Inspection | 8 | mandays | $280 | $2,240 |
| Miscellaneous Site Work | 24 | mandays | $250 | $6,000 |
| Site Work Materials | Lump Sum | Lump Sum | $2,000 | $2,000 |
| Insurance @ 1% of Direct Capital Cost | Lump Sum | Lump Sum | Variable | $22,600 |
| Reserve Fund @ 1% of Direct Capital Cost | Lump Sum | Lump Sum | Variable | $22,600 |
| **Estimated Annual Operating and Maintenance Costs** | | | | $93,180 |
| **Present Worth of Annual Operating & Maintenance Cost** (@5%, 30 years) | | | | $1,432,410 |
| **TOTAL PRESENT WORTH** | | | | $4,709,542 |

3/27/92

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# TABLE 3

## Town of Conklin Landfill Site
## Cost Estimate - Modified Remedy
## Consolidate Lower Landfill with Upper Landfill

| DIRECT CAPITAL COSTS<br>Item | Quantity | Units | Unit Cost | Total |
|---|---|---|---|---|
| **Site Preparation** | | | | |
| Clearing and Grubbing Landfill Area | 11 | Acres | $5,000 | $55,000 |
| Miscellaneous Site Grading | 35,500 | CY | $5.00 | $177,500 |
| **Consolidation of Lower Landfill to Upper Landfill** | | | | |
| Excavation of Lower Landfill | 34,360 | CY | $6.05 | $207,878 |
| TCLP Analysis of Residual Soil | 10 | Sample | $1,300.00 | $13,000 |
| Dewatering-Transport/Disposal | 200,000 | GAL | $0.35 | $70,000 |
| Haul Material to Upper Landfill | 34,360 | CY | $2.40 | $82,464 |
| Grading of Material at Upper Landfill | 34,360 | CY | $0.98 | $33,672 |
| Compaction of Material | 34,360 | CY | $0.91 | $32,177 |
| Buy/Haul/Place Daily Cover | 4,800 | CY | $10.00 | $48,000 |
| Buy/Haul/Place Fill at Lower Landfill | 18,000 | CY | $10.00 | $180,000 |
| **Cap Materials and Installation** | | | | |
| Buy/Haul/Place 1 ft. Gas Venting Layer | 9,680 | CY | $25.00 | $242,000 |
| Buy/Place 10 oz. Filter Fab. | 627,270 | SF | $0.30 | $188,181 |
| Buy/Place 40 miL HD Liner | 313,635 | SF | $0.45 | $87,504 |
| Buy/Haul/Place 24" Barrier Layer | 21,300 | CY | $12.00 | $255,600 |
| Buy/Haul/Place Topsoil 6" | 5,324 | CY | $17.00 | $90,508 |
| Buy/Place Seed, Fertilizer, and Mulch | 32,000 | SY | $1.00 | $32,000 |
| Buy/Place Gas Vents | 6 | Each | $500 | $3,000 |
| Proof Rolling | 6 | Acres | $1,000 | $6,000 |
| Cap Quality Assurance/Quality Control | Lump Sum | Lump Sum | $110,000 | $110,000 |
| Buy/Build Leachate Trench Collect. System | Lump Sum | Lump Sum | $70,000 | $70,000 |
| Buy/Install Leachate Well Pumps/Controls | Lump Sum | Lump Sum | $5,000 | $5,000 |
| **Leachate Treatment System** | | | | |
| Buy/Install Leachate Treatment System | Lump Sum | Lump Sum | $75,000 | $75,000 |
| Buy/Install Leachate Discharge Lines | 280 | LF | $8 | $2,240 |
| **Other Costs** | | | | |
| Site Fencing | 300 | LF | $10.00 | $3,000 |
| Miscellaneous Site Improvements | Lump Sum | Lump Sum | $31,000 | $31,000 |
| Safety Program | Lump Sum | Lump Sum | $56,500 | $56,500 |
| Dust Control | Lump Sum | Lump Sum | $10,000 | $10,000 |
| Off-Site Drainage Control | Lump Sum | Lump Sum | $5,000 | $5,000 |
| Equipment Decontamination | Lump Sum | Lump Sum | $6,000 | $12,000 |
| Mobilization/Demobilization | Lump Sum | Lump Sum | Variable | $54,000 |
| **Estimated Direct Capital Cost** | | | | **$2,238,224** |

3/27/92

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# TABLE 3

## Town of Conklin Landfill Site
## Cost Estimate - Modified Remedy
## Consolidate Lower Landfill with Upper Landfill

| DIRECT CAPITAL COSTS Item | Quantity | Units | Unit Cost | Total |
|---|---|---|---|---|
| **INDIRECT CAPITAL COSTS** | | | | |
| Contingency Allowance (25%) | | | | $559,556 |
| Engineering Fees (15%) | | | | $335,734 |
| Legal Fees (5%) | | | | $111,911 |
| | **Estimated Indirect Capital Cost** | | | **$1,007,201** |
| | **TOTAL ESTIMATED CAPITAL COST** | | | **$3,245,425** |
| **Annual Operating and Maintenance Costs** | | | | |
| Operate Leachate Treatment System | Lump Sum | Lump Sum | $2,000 | $2,000 |
| Leachate Treatment System Maintenance | 52 | Mandays | $100 | $5,200 |
| Leachate Treatment Sample Analysis | 40 | Samples | $200 | $8,000 |
| Groundwater Sampling | 8 | Mandays | $100 | $800 |
| Groundwater Sample Analysis | 28 | Samples | $200 | $5,600 |
| Site Mowing | 10 | Mandays | $100 | $1,000 |
| Site Inspection | 4 | Mandays | $100 | $400 |
| Cover Maintenance/Repairs | Lump Sum | Lump Sum | $5,000 | $5,000 |
| Insurance @ 1% of Direct Capital Cost | Lump Sum | Lump Sum | Variable | $22,382 |
| Reserve Fund @ 1% of Direct Capital Cost | Lump Sum | Lump Sum | Variable | $22,382 |
| | **Estimated Annual Operating and Maintenance Costs** | | | **$72,764** |
| | **Present Worth of Annual Operating and Maintenance Cost (@ 5%, 30 years)** | | | **$1,118,565** |
| | **TOTAL PRESENT WORTH** | | | **$4,363,990** |

# APPENDIX A

## Correspondence

BROOME COUNTY
*A Strategic move.*

January 6, 1992

Mr. Brian Davidson
New York State Department of
Environmental Conservation
Division of Hazardous Waste Remediation
50 Wolf Road
Albany, New York 12233-7010

Re: Remediation of Town of Conklin Land Fills

Dear Mr. Davidson:

I have recently been made aware that the Town of Conklin, in cooperation with the New York State Department of Environmental Conservation, is considering a new plan for the remediation of two inactive municipal land fills located within the Town. It is my understanding that the plan now under consideration involves the complete removal of refuse from the area referred to as the lower landfill, placement of this material at the location of the upper landfill, capping this landfill and installation of a leachate collection system at this site. In the view of the Broome County Industrial Development Agency, the plan how under consideration is much preferred over prior plans which would have require capping and collections systems for both landfills.

As you may be aware, the Broome County Industrial Development Agency is the developer and owner of a major industrial park which entirely encompasses the area surrounding these landfills. While all of our planning and design efforts have taken the existence of the upper landfill in to account, we have always been hopeful that the plan how under consideration regarding the lower landfill would be implemented and that the area of the lower landfill could be reclaimed for productive economic development use. Indeed, a comprehensive agreement between Broome County, the town of Conklin and the Broome County Industrial Development Agency anticipated this specific possibility.

As you consider the final remediation plan for this site, I urge you to consider that should you decide not to consolidate material at the upper landfill, a number of

*Broome County*
*Industrial Development Agency*
*109 Main Street*
*Johnson City, NY 13790*
*607-797-2345*
*FAX 607-797-4479*

adverse economic impacts will occur within the rail zone of the Broome Corporate Park. First, this highly valuable and productive industrial land with direct access to rail service will not be converted to assist in our efforts to create needed employment for Broome County residents. Secondly, the continued existence of the lower landfill will have an adverse impact on our ability to develop and market the rail sites located immediately south of the landfill area. These collective adverse impacts will in fact result in less employment and property tax generation for Broome County and the State of New York.

While the Broome County Industrial Development Agency is highly committed to the proper remediation of the town of Conklin landfills, I strongly urge you to consider these economic development implications as you seek to address this issue.

I would be most pleased to discuss this issue further if I can provide additional clarification or assistance.

Sincerely,

Mark E. Turner
Executive Director

cc: Mr. Gary Kerzic
Dunn Corporation
12 Metro Park Road
Albany, New York 12205

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STATE OF NEW YORK
DEPARTMENT OF HEALTH
Corning Tower The Governor Nelson A. Rockefeller Empire State Plaza Albany, New York 12237

Lorna McBarnette
Executive Deputy Commissioner

OFFICE OF PUBLIC HEALTH
Sue Kelly
Executive Deputy Director

January 3, 1992

Mr. Brran Davidson
NYS Department of Environmental Conservation
Division of Hazardous Waste Remediation
50 Wolf Road, Room 222
New York 12233

RE: Conklin Dumps Site (ID #704013)
Town of Conklin, Broome County
Justification for Significant
Change of the ROD

Dear Mr. Davidson:

As discussed in the meeting of 12/17/91, we discussed a proposed change to the existing Record of Decision (ROD) for remediation of the Conklin Dumps Site (ID #704013) in the Town of Conklin, Broome County. It is my understanding that this proposed change in site remediation will involve excavation of the lower landfill materials (non-hazardous) and consolidation with the upper landfill to meet grading requirements for closure and capping. Additionally, a leachate collection trench and leachate treatment system will also be installed at the upper landfill. I offer the following justification in support of this change:

- Excavation of the lower landfill materials and consolidation with the existing upper landfill will eliminate a potential source for possible future releases of contaminants to groundwater and impacts to downgradient residents with private water supplies. While excavation and removal of lower landfill materials will require post monitoring of groundwater quality, the O&M requirements will be of a much shorter duration (if no contaminants are detected), than that required if the waste remains in place.

- Furthermore, excavation of the lower landfill materials and consolidation with the existing upper landfill fill will better meet the goals of the RI/FS process as defined under CERCLA/SARA. The proposed alternative will provide permanent removal and reduction in waste volume of a potential contaminant release source, thereby offering a permanent remedy at one of the areas of concern at the Conklin Dumps site.

Should you have any questions or concerns regarding this letter, please call me at (518) 458-6306.

Sincerely,

Claudine F. Jones
Program Research Specialist II
Bureau of Environmental Exposure
Investigation

# EXPLANATION OF SIGNIFICANT DIFFERENCES
# CONKLIN DUMPS SITE

*APPENDIX B*
*STATE LETTER OF CONCURRENCE*

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

**Thomas C. Jorling**
**Commissioner**

AUG 31 1992

CSE
pursuant to
Callahan
Marshall

Mr. Constantine Sidamon-Eristoff
Regional Administrator
United States Environmental
Protection Agency, Region II
26 Federal Plaza
New York, New York 10278

Dear Mr. Sidamon-Eristoff:

RE: Conklin Dumps Site - No. 704013
Explanation of Significant Difference

The New York State Department of Environmental Conservation has reviewed the Final Explanation of Significant Differences for the Conklin Dumps Site and the Department concurs with its contents.

Sincerely,

Ann DeBarbieri
Deputy Commissioner

cc: K. Callahan, USEPA
J. Singerman, USEPA