ATTACHMENT B

RESPONSIVENESS SUMMARY

Post-Decision Evaluation of Sample Results and Selected Remedy

Volney Landfill Site
Source Control Operable Unit

Volney, New York

August 1989

Prepared by:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II
New York

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INTRODUCTION

This report summarizes the public comments and the U.S. Environmental Protection Agency's (EPA's) responses relative to the May 1989 draft Post-Decision Evaluation of Sample Results and Selected Remedy (PDE) for the Volney Landfill site source control operable unit, located in Volney, New York.

A Remedial Investigation and Feasibility Study (RI/FS) for the Volney Landfill site was completed by New York State Department of Environmental Conservation's (DEC's) contractor, URS Company, Inc. (URS), in May 1987. Following the signing of a Record of Decision (ROD) for the source control operable unit by EPA on July 31, 1987, it was learned that a quality assurance/quality control (QA/QC) review of the analytical data from the RI/FS had not been performed. Following a QA/QC review of the data, it was concluded that the data were invalid. Since a remedy was selected in the ROD based on these invalid data, the status of the remedy was in question.

To rectify the situation described above, EPA tasked its contractor, Ebasco Services, Inc. (Ebasco), to resample the groundwater monitoring wells, surface water, sediments and leachate as the most expedient and justifiable means of collecting the necessary data so that the remedy selected in the ROD could be re-evaluated. This resampling was conducted in May 1988.

The purpose of the PDE is to present EPA's sample results, to summarize what health and environmental risks are posed by the site, and to determine whether the remedy selected in the ROD is protective of human health and the environment. Additionally, since the ROD was signed, information was made available to EPA by the public regarding the selected remedy and its associated costs. This additional information has been considered in this Responsiveness Summary by EPA in arriving at a final decision on the remedy for the source control operable unit.

A public comment period for the submission of written comments was scheduled to close on June 2, 1989, however, due to a request from the public, the comment period was extended until June 26, 1989. EPA also held two public availability sessions on May 24, 1989 at the Volney Town Hall to provide individuals with the opportunity to ask specific questions on the PDE. Copies of the report were made available for public review at the Town Clerk's Office, Volney Town Hall, Route 3, Volney, New York; the City of Fulton Public Library, 160 South First Street, Fulton, New York; the DEC Central Office, 50 Wolf Road, Albany, New York; and at EPA's Region 2 Office, 26 Federal Plaza, New York, New York.

Verbal comments obtained during the availability sessions and written comments are summarized and responded to in this Responsiveness Summary. Only comments or questions pertaining to the PDE were considered in this Responsiveness Summary. This Responsiveness Summary is an attachment to the Post-Decision Document (PDD), which formally states EPA's final decision on the remedy for this source control operable unit.

RESPONSE TO COMMENTS RECEIVED DURING PUBLIC AVAILABILITY SESSIONS

Some of the concerns raised during the availability sessions were also documented in written comments. Therefore, to avoid repetition, these duplicative comments will be responded to in the written comments section. In addition, Oswego County prepared a videotape of the availability sessions which is available at the site repositories.

Afternoon Session

The afternoon availability session consisted primarily of local officials and the media, with only a few area residents represented. Oswego County representatives presented their concerns regarding the PDE and also provided written comments which further documented their position. Their concerns will be responded to in the written comments section. Other questions and their responses are summarized below:

Question: Why were seven of the twenty-five wells not sampled by Ebasco and how does this impact the remedy decision?

Response: In the Work Plan and Field Operations Plan, prepared by Ebasco, a preliminary determination was made (prior to the commencement of field activities) that certain monitoring wells would not be sampled either because a sufficient volume of water was not available in the well or the well had certain construction deficiencies which could result in a non-representative sample (The complete Plan is available for review at the repositories). In addition, during field investigations, the actual conditions of the monitoring wells were determined. The field change request's, prepared by Ebasco during field activities, indicate that additional monitoring wells were eliminated from the resampling due to either insufficient water volume or the upper well casings were bent.

Even though the seven wells were not sampled, EPA has determined that a sufficient number of data points were obtained to justify a source control remedy.

Question: Were any bedrock wells sampled by Ebasco since well VBW-10BR was omitted from their sampling plan and it previously

indicated significant contamination? If sampled, was contamination detected in the bedrock?

Response: Bedrock wells VBW-3BR and VBW-8BR were sampled by Ebasco. Both organic and inorganic contaminants were detected.

Question: Will an additional health assessment be conducted by the Agency for Toxic Substances and Disease Registry on the second operable unit (contamination pathways (CP) RI/FS)?

Response: A health assessment is usually performed once for a site unless extenuating circumstances warrant another.

Question: Was the site placed on the National Priorities List (NPL) primarily because of its association with the Pollution Abatement Services (PAS) site?

Response: Based on the Hazard Ranking System (which ranks the site based on various criteria), the potential threat of contamination to the residential drinking water supply wells and the site's association with the PAS site were major factors for its inclusion on the NPL.

Question: Why not provide a public water supply to area residents?

Response: The objective of this remedy is source control. The remedial alternatives for the CP RI/FS could include an alternative water supply should the analytical results from the CP RI/FS indicate that there is a need.

Question: Will the public be involved during the development of the Work Plan for the CP RI/FS?

Response: The public will be able to review and comment on the Work Plan which will be made available in the site repositories. EPA and its contractor will consider information provided by the State, the County, and other interested parties.

Question: Will the CP RI/FS results influence the source control remedy?

Response: Source control is intended to prevent further contaminant migration from the site. This remedy is essentially independent from any remedy that may be proposed in the CP study.

The objective of the CP RI/FS is to evaluate potential shallow and bedrock contamination by assessing the extent of groundwater contamination from the landfill in both horizontal and vertical directions. An expanded residential well survey, as well as an assessment of the site's impact upon the stream/wetland systems adjacent to and downstream from the landfill, will also be conducted during the CP RI/FS.

Question: What occurs after the availability sessions?

Response: Following the close of the public comment period on June 26, 1989, a Responsiveness Summary will be prepared, followed by a PDD which will document the final decision and is signed by EPA and concurred with by DEC. Following the signing of the PDD, EPA will provide the potentially responsible parties (PRPs) with the opportunity to design and construct the selected remedy. If they decline, then EPA (using federal funds) will perform the design and construction, and will ultimately try to recover its costs from the PRPs. Leachate generation and treatability studies will be conducted during the design phase. Also, once the PDD is signed, EPA will provide the PRPs with the opportunity to perform the CP RI/FS. If they decline, then EPA will perform the work.

Evening Session

The evening availability session consisted primarily of citizen committees and area residents. Most of the concerns raised were regarding the current and future disposal of leachate from the site. Questions raised along with their responses are provided below:

Question: Recently the County stopped sending leachate from the site to the City of Fulton Water Pollution Control Plant (FWPCP), and is currently storing the leachate in an on-site tank. Who at the DEC monitors the County's disposal of leachate from the site? Who is monitoring the level of leachate in the tank, what is the tank's capacity, and what happens if it overflows?

Response: In accordance with New York State regulations, a State Pollution Discharge Elimination System (SPDES)-permitted wastewater treatment facility must notify the DEC of its intention to accept leachate from a landfill (which should include a characterization of the waste). DEC previously conditionally approved the treatment of the Volney Landfill leachate at the FWPCP.

The FWPCP is not permitted to accept, and is currently not accepting, the landfill leachate because the additional treatment system required to meet its SPDES permit limits is under

construction. Upon completion of construction, the FWPCP must reapply to DEC for future approval to accept the landfill leachate for treatment. This application must address the following items: landfill leachate composition and quantity data; pretreatment program requirements; and an engineering evaluation of disposal which includes treatment plant performance, future growth within the City, user rate fee, and sludge disposal. The DEC cannot approve a FWPCP reapplication until the judicial order between the State and the FWPCP is fulfilled (the order requires that the FWPCP meet its discharge limits, permit requirements, reporting deadlines and construction milestones).

In addition, EPA and DEC are currently determining whether or not the leachate at the site is classified as a listed hazardous waste under the Resource Conservation and Recovery Act or the State Environmental Conservation Law. If it is hazardous, specific RCRA requirements would have to be met if the leachate is to be treated at the FWPCP or any other off-site treatment facility. These findings will be documented during the design phase.

Currently, the County is monitoring the level of the leachate in the on-site storage tank. As of August 4, 1989, the County determined that the tank is approximately half-full with leachate. The tank has a design capacity of approximately 300,000 gallons with an overflow capacity of approximately 374,000 gallons. In the event of an overflow, the County must immediately notify the DEC and initiate appropriate mitigation measures. The last time the County removed leachate from the tank was on June 1, 1988.

Question: How can we be sure once the remedy is implemented that the leachate from the site will not be sent to a sewage treatment plant that already exceeds its SPDES permit requirements?

Response: The treatability studies that will be conducted during the design phase will evaluate whether the leachate will be treated either on- or off-site. The ability of off-site treatment facilities to effectively treat the leachate will be investigated at that time. EPA and DEC policy prohibits leachate to be sent to a treatment plant that is not in compliance with its federal or state discharge permit requirements. It must be demonstrated that the treatment plant has the ability (i.e., performance and capacity) to treat the leachate effectively and also meet its permit requirements.

Question: What will EPA's responsibility be regarding the long-term operation and maintenance (O&M) at the site?

Response: Either DEC or the PRPs will be responsible for carrying out the O&M activities at the site in conformance with the O&M Plan that will be developed as part of the design and construction phase. EPA will conduct oversight activities as required under the O&M Plan.

Question: If leachate is treated on-site, where will the effluent from the treatment plant be discharged?

Response: The ROD states that the effluent from an on-site leachate treatment plant would be discharged to Bell Creek in conformance with SPDES permit requirements.

Question: How far down Bell Creek did Ebasco sample the surface water and sediments?

Response: Surface water and sediment sample VSS-5 is located the farthest downstream of the site. Page 7 of the PDE identifies the location of all surface water and sediment samples.

RESPONSE TO WRITTEN COMMENTS

As mentioned in the introduction, since the ROD was signed, information was made available to EPA by the public regarding the selected remedy and its associated costs. Comment letters received on the PDE reaffirm the previous questions raised in addition to addressing new concerns. A summary of the concerns raised and EPA's responses are provide below:

Question: Oswego County believes that the data it has collected at the site since 1984 is valid and essential in deciding the most environmentally-sound and effective remedial plan for the site. Has this data been considered by EPA during its decision making process?

Response: EPA is aware that extensive data exist as a result of the County's monitoring program (i.e., residential and monitoring wells). This is evidenced by Section 1.1.3 of the RI/FS which discusses previous investigations at the site. That section summarizes the ongoing monitoring program conducted by the County and it concludes that historically, certain compounds detected in monitoring wells exceed groundwater standards. This contamination was determined to be non-uniform and generally low-level.

For NPL sites, EPA cannot use data to characterize a site or to determine the associated risks unless it meets all EPA QA/QC criteria. Even though the County's data was, and is currently,

collected in accordance with applicable DEC landfill closure requirements, the fact remains that the landfill is an NPL site and data collection and analysis must conform to EPA's QA/QC requirements for it to be useable.

In January 1988 (prior to EPA's May 1988 resampling at the site), EPA attempted to validate data from the site provided by Oswego County. An abbreviated QA/QC review of this data performed by EPA revealed exceedance of some holding times. In addition, sufficient QA/QC back-up documentation was not available from the County labs. Due to the magnitude of EPA's time and effort that would have been involved, and the limited availability of funds, EPA was not able to initiate a more extensive QA/QC review. Oswego County was then offered the opportunity to perform the full QA/QC review on its own, with EPA oversight. The County, however, did not follow-up on EPA's offer.

EPA has, however, rereviewed the data that the County has provided since the RI/FS in a historical context. This review revealed that over the five year monitoring period, although some of the monitoring wells have generally exhibited an increasing trend in water quality (due in part to the effect of closure of part of the landfill), other wells indicate that contaminants are still present in low-levels. The long-term monitoring results may also be useful in determining certain elements for the CP RI/FS Scope of Work and current estimates of leachate generation.

Question: Why weren't the inorganic groundwater samples filtered during Ebasco's resampling activities?

Response: Filtering allows measurement of only the dissolved portion of a contaminant in a sample. It is EPA policy to provide a sample which is representative of actual groundwater conditions at a site. At a minimum, samples should be characterized in an unfiltered condition, or collected in both an unfiltered and filtered manner.

Question: The County contends that the risks to human health and the environment as a result of Ebasco's resampling are not as severe as EPA states in the PDE, and that these contaminants are typical of many sanitary landfills. Specifically, the arsenic and volatile organic risks are overstated.

Response: As stated in the PDE, evidence exists for and against attributing the arsenic in the groundwater to the site. However, EPA has conservatively concluded that arsenic is attributable to the site. As discussed above, EPA determined that risks to human health and the environment due to the violation of groundwater

ARARs and the possible non-carcinogenic impacts would still exist without the inclusion of arsenic. As a result, arsenic is not the sole basis for justifying remediating this site as called for in the ROD. It should also be noted that certain volatile organics were detected in the groundwater during Ebasco's resampling, which adds to the overall risk at the site.

Question: Some commentors requested that the CP RI/FS should be completed prior to selecting a remedy for the source control operable unit in order to obtain a better understanding of the migration from the site.

Response: The objective of source control is to prevent further contaminant migration from the site. The CP RI/FS will further define the extent of contamination from the site. EPA's decision to select a source control remedy followed by further evaluation of potential remediation measures for contamination migration from the landfill is consistent with the approach taken at many NPL sites. Even though certain wells in the southern portion of the site were not able to be sampled (as discussed earlier), two wells, VBW-10D and VBW-11, are located south of the site and were sampled. EPA has determined that a sufficient characterization of the groundwater has been conducted and a substantial knowledge of the site's geohydrologic conditions are known.

Due to the non-uniform distribution of contamination in the wells and the radial flow of groundwater from the site, an element of the containment remedy is to install a leachate collection system (using drains) in the areas where there exists a significant depth of saturated soils above the glacial till. As a result, the drains will be located in the northern and southwestern portions of the site.

Question: Couldn't an active hydraulic barrier consisting of extraction wells, instead of the passive slurry trench barrier with leachate collection inside as called for in the ROD, be utilized to contain the site?

Response: In the development of remedial alternatives in the RI/FS, passive versus active leachate containment was evaluated. The soil permeabilities and recharge rates in the area of the landfill were shown to be too low to accommodate pumping wells. The permeability of the fill material around the site is also heterogeneous; therefore, it would be difficult to ensure that pumping could be sustained.

A slurry wall would minimize the entry of clean groundwater from beyond the landfill limits into the collection drain. This

in turn would reduce the long-term O&M activities associated with treatment of the groundwater. In an active pumping system, the mixture of contaminants and clean groundwater would require treatment.

Question: Commentors suggested that due to the relatively inexpensive leachate treatment arrangements the County has made with the FWPCP, expenditures for leachate collection drains and slurry walls to prevent clean groundwater from entering the leachate collection system is not justified. Why not just use a system of recovery wells instead?

Response: Due to the site conditions discussed in the previous response, recovery wells are technically impracticable. In addition, a major aspect of the containment remedy is to minimize long-term O&M. This will be accomplished by use of slurry walls and accompanying drains. Even if pumping wells were feasible, they would draw large volumes of clean groundwater, thereby increasing O&M activities.

EPA's decision regarding the selected remedy was made two years ago when the ROD was signed. Information regarding off-site leachate treatment costs that was made available to EPA after the ROD was signed has been considered. However, uncertainties associated with providing efficient long-term treatment of the leachate from the landfill were recently raised. EPA is aware of the continuing efforts being made by the County to obtain a long-term commitment from an off-site facility and would welcome future information regarding these efforts. After consideration of the above issues, EPA believes that use of slurry walls and associated leachate collection drains are still protective of human health and the environment and cost-effective. However, during the remedial design, leachate generation studies as well as treatability studies which include long-term leachate treatment and cost determinations, will be conducted. Based on these studies, an evaluation of the cost-effectiveness of the slurry walls will be performed.

Question: EPA should consider the effectiveness of, or need to replace, the existing leachate collection system in the northern portion of the landfill.

Response: Section 12.1.2 of the RI/FS discusses possible variations to the remedy which includes a brief discussion on the existing northern leachate collection drain. However, the impact of the northern drain upon the selected remedy could not be fully evaluated at that time. EPA has, therefore, determined that during design, the design, construction, operation and performance of the existing collection system will be evaluated

in order to determine how it can be integrated with the new drain and slurry wall. Should the existing drainage system serve the same function as the proposed north drain segment, then a new north drain may not be necessary. Depending on the results of the evaluation, modifications to the existing north drain could however, be required.

Question: Some commentors preferred that the leachate from the landfill be treated off-site while another commentor preferred on-site treatment. The County noted that the quantities of leachate currently produced at the landfill are lower than the quantities indicated in the ROD.

Response: There are advantages and disadvantages of both methods of leachate treatment as is evidenced by the discussions in the ROD, and based on post-ROD information that has been submitted. A determination will be made during the design treatability studies as to whether the leachate will be treated on- or off-site. The performance and cost-effectiveness of both methods will be evaluated at that time also.

The estimated quantity of leachate produced for the landfill calculated in the RI/FS and ROD was based on information available at that time. The calculations were based on a water balance for the entire landfill and could not take into account the efficiency of the existing north drain, which would probably reduce the estimated quantity of vertical seepage and lateral groundwater outflow from the north portion of the landfill. In addition, since the ROD, vertical seepage has probably decreased as a result of the cap on the landfill top.

Oswego County recently submitted estimates of leachate production which are significantly lower than the estimates in the ROD. However, after taking into account the above discussion and the fact that the County's estimate does not include leachate generated from the south portion of the landfill, the two estimates may be more comparable. Whatever the actual volume of leachate generated is determined to be, that number will be consistently applied while comparing on- and off-site treatment.

To aid in the final determination, EPA will continue to consider information provided by the County or the public regarding leachate collection and treatment.

Question: Since the ROD, commentors stated that leachate could be treated off-site at a fraction of the cost on which the ROD was based.

Response: The cost estimate provided in the ROD for on- and off-site leachate treatment was based on information available at that time. EPA is aware of certain arrangements made by the County to attempt to provide long-term treatment of the landfill leachate. However, EPA is also cognizant of the uncertainties associated with long-term commitments for off-site treatment of leachate from an NPL site. Many factors can affect the ability of an off-site treatment plant to accept and effectively treat landfill leachate on a long-term basis. During the predesign, EPA will evaluate cost as one of the many factors to help determine the most effective treatment scheme for the landfill leachate.

Question: Why not prepare an additional PDE to evaluate remedies of equivalent or superior performance?

Response: During the RI/FS, a wide universe of remedial technologies and alternatives were considered and evaluated. Of the alternatives evaluated in the RI/FS and of the proposed methods of remediation presented by commentors (which were also considered in the RI/FS), the source control remedy selected in the ROD is protective of human health and the environment and cost-effective. This Responsiveness Summary also further elaborates why certain remedial technologies were not considered appropriate for the final remedy. As a result, there is no need to prepare an additional PDE.

Question: The PDE should specifically define the portion of the site which is known to have received PAS waste and should exclude the portions of the site which can be confirmed not to include PAS waste. All remedies to the site should be considered to apply only to the portion which received the PAS waste.

Response: As stated in the ROD, the PAS waste was allegedly buried in the landfill between March 1974 and January 1975. As a health and safety precaution, no soil borings were conducted in the fill itself. As a result, the location of that waste in the landfill is uncertain. However, residential, commercial, institutional and light industrial waste were deposited throughout the landfill from 1969 until its closure in 1983. These materials could have contributed to the contamination at the site. It is not feasible, therefore, to apply the remedy to only a portion of the landfill.

VOLNEY LANDFILL PUBLIC
AVAILABILITY SESSION 5/24/89

	NAME	ADDRESS/AFFILIATION
1.	Stephon Buchiere	Valley News, Fulton
2.	Don Harting	Syracuse newspapers
3.	Carolyn Rush	Oswego County
4.	Thomas LoBasso	[illegible] & Miller
5.	Paul Dudden	Barton & Loguidice
6.	Arthur Ospelt	Oswego County
7.	Katie Lacey	DEC - Reg 7 - CRS
8.	Tim Carroll	FSDWAC
9.	Ron Scrudato	Oswego, NY.
10.	Bill Buck	Co. Legislator - Town of Volney
11	Paul A Kimball	Town Volney & supervisor 10 yrs
12	Robert McNamee	NYSDEC - Albany
13	Mark Kauffman	NYSDEC - Albany
14.	~~Wendy [illegible]~~	~~Bond, Schoeneck & King~~
15.	Mike Keefer	Resident
16.	Gerald Gould	Stearns & Wheler - representing City of F
17	Chris Williams	Oswego County Health Dept
18	Bob Howe	USEPA - Region 2
19.	Joel Singerman	EPA
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