3082-04

de maximis, inc.

301 Gallaher View Road
Suite 227
Knoxville, TN 37919
(423) 691-5052
Fax (423) 691-6485

July 17, 1996

Mr. Richard J. Robinson
U.S. EPA - Region II
290 Broadway, 19th Floor
New York, New York 10007

Ms. Diane Seigel
NJDEP - CN413
401 East State Street
Trenton, New Jersey 08625-0413

Subject: **D'Imperio Property Site**
Response to Comments - Draft DGW Permit Equivalent/CEA

Dear Mr. Robinson and Ms. Seigel:

As follow up to my correspondence of June 27, 1996 which provided the response to comment on the Phase II GWI Report, enclosed please find suggested modifications to the Draft DGW Permit Equivalent and Classification Exception Area (CEA) document. The suggested modifications in the attached document address comments received in your March 18th correspondence and also incorporates the proposed response action in the Lower Cohansey Formation.

I would like to schedule a teleconference to discuss the proposed changes as soon as possible. As we discussed, start-up/shakedown of the plant should occur within the next two weeks and thus the permit equivalent needs to be finalized. It is my understanding that startup of the plant may proceed as we finalize this document as the Long-Term Monitoring Plan has been approved.

I will contact you to set a meeting time to discuss the enclosed. In the meantime, if you or your staff have questions, please contact me at (423) 691-5052.

Sincerely,
de maximis, inc.

Robert L. Darwin
Project Coordinator

RD\jcm

Enclosure

cc: Michael J. Van Itallie, Esquire
D'Imperio Property Site Group
Sean Monaghan, Shanley & Fisher
John Bartholomew, U.S. Army Corps of Engineers
Scott MacMillin, ECKENFELDER

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SUGGESTED MODIFICATION

NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM DISCHARGE TO GROUND WATER (NJPDES-DGW) SUBSTANTIVE REQUIREMENTS

D'IMPERIO SUPERFUND SITE REMEDIAL ACTION

BACKGROUND

The D'Imperio Property Site is located in Hamilton Township, Atlantic County, New Jersey. The site is comprised of about 26 acres, of which approximately one and one-half acres were used for unauthorized waste disposal in the mid-1970s. The dump reportedly received drummed waste containing metals and various volatile organic solvents.

The site was placed on the National Priorities List (NPL) in 1983 and the USEPA completed the Remedial Investigation/Feasibility Study (RI/FS) in 1985. The Record of Decision (ROD) issued in March 1985 included the excavation and off-site disposal of approximately 3,900 cubic yards of contaminated waste materials and the installation of a groundwater recovery, treatment and discharge system.

The USEPA completed the excavation and off-site disposal of waste materials in 1987, and a groundwater recovery and treatment system design was completed in 1992.

In accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 106 Administrative Order (the Order) dated August 5, 1993 (as amended October 14, 1993), a Phase I Groundwater Investigation (GWI) was conducted for the site to evaluate how the character and areal extent of groundwater contamination may have changed since completion of the RI/FS. The Phase I GWI Report was approved by the USEPA on December 29, 1994. The data collected during the Phase I GWI revealed a number of significant differences in the subsurface conditions. The results of the Phase I GWI showed that the contaminants in the groundwater have migrated significantly greater distances from the site than was previously reported, the concentrations of the volatile organic constituents and BOD in the groundwater have declined considerably over time, VOC contaminants have migrated vertically into the Lower Cohansey Sand which require characterization, and DNAPLs may be present at the site. The results and conclusions of the Phase I GWI were used in the modification of the USEPA remedial design which was completed and approved by the USEPA in June, 1995.

A Phase II GWI was conducted as a supplement to the Phase I GWI in order to provide further definition of the VOC plume within the Lower Cohansey aquifer. The results of the Phase II GWI, which were submitted to USEPA in February 1996, provide a characterization of the Lower Cohansey plume and reveal the fact that it rapidly decreases in concentration in the area west (downgradient) of Cologne Road.

~~The proposed remedial action~~ **The remedial action** consists of a groundwater extraction and treatment system which will remove source area contamination within the Bridgeton, ~~and~~ Upper Cohansey, **and Lower Cohansey** Formations by hydraulic source control, collection, and treatment. The system will also collect and treat groundwater from the dissolved plume area and also prevent further downgradient migration to the Lower Cohansey Sand. Treated groundwater will be injected in wells in the Bridgeton Sand and in the Upper Cohansey Sand. ~~The contaminant plume in the Lower Cohansey Sand will be defined in a Phase II GWI. Depending upon the results, the design may require further modification.~~

DESCRIPTION OF NJPDES-DGW SUBSTANTIVE REQUIREMENTS

In order to ensure that remedial operations at Superfund Sites remain consistent with State regulations, the CERCLA law mandates a comprehensive listing of the "substantive requirements" be established and fulfilled. New Jersey often provides these requirements by issuing permit equivalents for remedial activities which normally require permits. In this case, New Jersey Pollutant Discharge Elimination System Discharge to Ground Water (NJPDES-DGW) substantive requirements will be issued in order to monitor discharge activities associated with the injection of treated groundwater during the operation and maintenance of the ground water pump and treat system. These substantive requirements will require monitoring of the rate of discharge and sampling and analysis of the water at the point of discharge from the treatment plant, along with other restrictions.

CONTACT PERSON

Additional information regarding these NJPDES-DGW substantive requirements may be obtained from Diane Seigel, Site Manager, Bureau of Site Management at (609) ~~984-2990~~ **777-1386.**

D'IMPERIO SUPERFUND SITE
NJPDES-DGW SUBSTANTIVE REQUIREMENTS

CONTENTS

ATTACHMENTS

SUGGESTED MODIFICATION

A. GENERAL REQUIREMENTS

1. All water samples must be analyzed by a laboratory approved by the State, and Quality Assurance and Quality Control (QA/QC) deliverables must be submitted in full regulatory format. All data must be submitted to the NJDEP Site Manager identified in Section C of these substantive requirements, for appropriate Departmental review.

B. SPECIFIC MONITORING REQUIREMENTS

1. Maximum Discharge - The estimated maximum discharge is ~~302,400~~ **383,400** gallons per day.

2. Treatment Duration - The duration of the discharge due to treatment plant operations shall not exceed 11 years. A written request must be made to extend this period, if required.

3. Compliance Sampling - The permittee shall sample and analyze the effluent from the groundwater treatment plant for compliance with the treatment standards specified in the ROD and listed in the 106 Order. The compliance samples shall be collected downstream of on-line monitors, prior to groundwater reinjection but after the effluent holding tank.

   Initially, compliance samples shall be collected monthly. After the first year of operation has been completed, the monitoring schedule will be changed to quarterly monitoring of permitted parameters. Quarterly sampling and reporting will then continue for the duration of the remediation, unless operating data indicate the need for a change in the frequency which would require NJDEP approval.

4. Groundwater Quality Sampling - ~~The permittee shall sample and analyze the water from plume and perimeter monitor wells for select volatile organic compounds, phenol, inorganics, and various metals (refer to Table 2-3 extracted from the D'Imperio Property Site 100% Design Review Engineering Design Report, Volume VI - Appendix J, Long Term Groundwater Monitoring Plan for a complete listing of parameters).~~ **The permittee shall sample and analyze the water from plume, perimeter and background wells, as listed on Table 2-3 (Revision 1-B, as attached) of the Long-Term Groundwater Monitoring Plan, or revised document as approved by the Department. The samples shall be tested for select volatile organic compounds, phenol, inorganics and various metals as listed on Table 2-4 (Revision 0, as attached) of the Long-Term Groundwater Monitoring Plan, or revised document as approved by the Department.**

   Samples shall be collected ~~semi-annually~~ **quarterly** from the perimeter monitor wells and ~~annually~~ **semi-annually** from the plume wells through Year 2. Should a plume

well indicate contaminant levels below groundwater standards, the schedule will revert to quarterly. If the analyses for a perimeter well indicate concentrations at or below the acceptable levels for four consecutive quarters, then upon petition to NJDEP and approval, the perimeter well would be shut down and the next up gradient well would become the leading edge perimeter well. The sampling frequency shall **decrease to semi-annually for perimeter wells and annually for plume and background wells after the initial two-year period. This duration shall** remain the same for the duration of the system operation, however, the parameters may be re-evaluated as remediation occurs.

5. Hydraulic Monitoring - The permittee shall conduct hydraulic monitoring to provide observational data that the groundwater recovery system achieves and maintains capture of the plume. The hydraulic monitoring shall consist of monitoring the depth to water in monitoring wells, and monitoring the depth to water and flow rates in extraction wells.

~~All extraction and reinjection wells, and monitor wells MW-20-1, MW-20-3, MW-24-2, MW-25-1, MW-28-1, MW-28-2, MW-29-1, MW-38, MW-41, MW-43 shall be monitored for depth to water; and all extraction wells shall be monitored for flow rates for the first six (6) months.~~ **All extraction and reinjection wells, and the hydraulic monitoring wells listed on Table 2-1 (Revision 1, as attached) of the Long-Term Groundwater Monitoring Plan, or revised document as approved by the Department.** The schedule is as follows:

Frequency	Duration
Daily	1st Week
Twice per week	Weeks 2 through 4
Once per week (a)	Months 2 and 3 (a)
Once per month	Months 4 through 6

(a) Should the system reach steady state before the third month, the frequency may be decreased to monthly.

~~After the sixth month, the hydraulic monitoring schedule will proceed as follows:~~ **After the sixth month, hydraulic monitoring shall be performed per the schedule listed on Table 2-2 (Revision 1-B, as attached) of the Long-Term Groundwater Monitoring Plan, or revised document as approved by the Department.**

~~Location~~	~~Parameters~~	~~Frequency~~	~~Duration~~
~~Specified MW All Extr. Wells~~	~~Depth to Water Depth to Water & Flow Rates~~	~~One per qtr. Once per month~~	~~Month 6-12 O&M Phase~~

~~Specified MW~~	~~Depth to Water~~	~~Re-evaluate~~	~~O&M Phase~~
~~All Extr. Wells~~	~~Flow Rates~~	~~Re-evaluate~~	~~O&M Phase~~

6. Classification Exception Area / Well Restriction Area (CEA/WRA) - As required by the New Jersey Ground Water Quality Standards (GWQS), N.J.A.C. 7:9-6 et seq., a CEA must be established as part of an approved remedy whenever constituent standards applicable to a groundwater classification area are not or will not be met for the term of the remediation. The treatment standards specified in the ROD and listed in the 106 Order are less stringent than the NJ GWQS for a Class I aquifer. The Bridgeton and Cohansey aquifers are rated as Class I.

   Pursuant to N.J.A.C. 7:9-6.6(d), the Department is obligated to restrict or require the restriction of potable groundwater uses within any CEA where there is or will be an ~~exceedence~~ **exceedance** of the Primary Drinking Water Standards (N.J.A.C. 7:10). Therefore, when contaminant levels in a CEA exceed Maximum Contaminant Levels (MCLs), and designated aquifer use based on classification includes potable use, the Department will identify the CEA as a WRA. The WRA functions as the institutional control by which potable use restriction can be effected. ~~Refer to the Revised Phase I Groundwater Investigation Report, D'Imperio Property Site, Volume I - Text, November, 1994, Section 6.0, for groundwater flow modeling using MODFLOW and the plume are delineations in the Bridgeton and Upper Cohansey aquifers.~~ **Refer to the Phase II Groundwater Investigation Report, D'Imperio Property Site, Volume I - Text, February 1996, Section 5.0 for the plume area delineation in the Bridgeton, Upper Cohansey and Lower Cohansey aquifers and Section 6.0 for the groundwater modeling using MODFLOW.**

   For the D'Imperio Superfund Site, the CEA is the plume area in the Bridgeton, ~~and~~ Upper Cohansey, **and Lower Cohansey** aquifers. Since the GWQS must be met at the boundaries of the outside the CEA, plume fringe and sentinel well monitoring data will be used to demonstrate that the area in which standards are temporarily exceeded has not increased beyond the original boundaries of the CEA. This monitoring is covered under Item 4 above - Groundwater Quality Sampling. The CEA Information and WRA Notice Memo are included in Attachment 1 of these substantive requirements.

C. DATA SUBMISSION REQUIREMENTS

1. A quarterly report presenting all pertinent data and observations shall be prepared and submitted to the NJDEP. This submittal must be directed to the following address:

Bureau of Site Management
Division of Publicly Funded Site Remediation
NJ Department of Environmental Protection
CN 413, 401 E. State Street
Trenton, NJ 08625
Attention: Diane Seigel

This report shall, at a minimum, contain the following items:

a. Data summary tables for discharge water which clearly present all sampling and monitoring data (e.g. sampling dates, analytical results, detection limits, quantity pumped per day with dates); and

b. A narrative which discusses any mechanical or environmental problems associated with the discharge operations (e.g. difficulty with injection rates, spills)

2. If the permittee anticipates the inability to meet a due date for a permit required submittal, an extension of the due date may be requested. The request for an extension can only be considered if the request is received by the NJDEP Site Manager in writing prior to the due date of the submittal. The request must include a detailed explanation as the why the submittal will be late, and provide a reasonable date when the document will be delivered. Upon evaluation of the request, a decision will be made to approve or reject the request and the permittee will be notified of such a decision in writing. It must be noted that approval of extensions for reporting submittal is reserved for extenuating circumstances only.

ATTACHMENT 1

D'IMPERIO SUPERFUND SITE
CLASSIFICATION EXCEPTION AREA (CEA)
INFORMATION

Site Name/Location:

D'Imperio Property Superfund Site
Route 322 (Blackhorse Pike), Route 40, and Cologne Road
Hamilton Township, Atlantic County

Block: 1134 Lot: 3.03

Site Contract Person:

D'Imperio Property Site Group, c/o Mr. Robert Darwin
de maximis, inc.
301 Gallaher View Road, Suite 227
Knoxville, TN 37919
~~(615)~~ (423) 691-5052

Lead Program:

Site Remediation
Division of Publicly Funded Site Remediation
CN 413
401 E. State Street
Trenton, NJ 08625

Site Manager: Diane Seigel
(609) ~~984-2990~~ 777-1386

Description of CEA:

This CEA applies to ~~two~~ **three** Class I aquifers -- Bridgeton, ~~and~~ Upper Cohansey, **and Lower Cohansey** -- in the Pinelands Protection Area. The CEA boundaries consist of the delineated plume area in each aquifer, as shown on ~~figures 6-7 and 6-8 in the Revised Phase I Groundwater Investigation Report, Volume I, Section 6.0, November, 1994~~ **figures 5-1, 5-2, and 5-3 in the Phase II Groundwater Investigation Report (Eckenfelder Inc., February 1996)** (figures also attached). The plumes are **generally** within the triangle formed by Cologne Avenue, Route 322 (Blackhorse Pike), and Route 40. The projected longevity of the CEA is 15 years. As the remediation proceeds and monitoring data is reviewed, the CEA boundaries may be reduced over time as the GWQS for volatile organics are met.

SUGGESTED MODIFICATION

TO: Bureau of Water Allocation
Water Supply Element

FROM: Diane Seigel
DPFSR
Bureau of Site Management

SUBJECT: Well Restriction Area (WRA) Notice

1. A WRA has been established in Hamilton Township, Atlantic County. ~~Block 1134, Lot 3.03 is affected.~~ **Portions of the following lots are affected:**

Block	Lot
1134	**1**
1134	**2**
1134	**3.03**
1027	**2**

A map of the area is attached.

2 The point of contact for all questions concerning the delineation of the WRA is Diane Seigel, Site Manager, DPFSR, BSM.

3. No **water supply** wells may be drilled within the WRA. All **potable water supply** drilling is to be restricted.

SUGGESTED MODIFICATION

Maps:

Site and plume boundaries are shown on ~~figures 6-7 and 6-8 in the Revised Phase I Groundwater Investigation Report, Volume I, Section 6.0, November, 1994~~ **figures 5-1, 5-2, and 5-3 in the Phase II Groundwater Investigation Report (Eckenfelder Inc., February 1996)** (figures also attached).

Proposed Water Use Restrictions:

All **water supply** well types are to be restricted within the CEA. Due to the geology of the area and the contaminants in ~~both~~ the Bridgeton, ~~and~~ Upper Cohansey, **and Lower Cohansey** aquifers ~~and possible contamination in the Lower Cohansey~~, no wells are to be drilled within the plume until the remediation is complete. Note that the remediation consists of the active pump, treat, and reinject system for gross contamination remediation to the Record of Decision (ROD) levels and the passive natural attenuation to the NJ Ground Water Quality Standards (GWQS).

ATTACHMENT 2

~~SITE MAPS~~ LTGWMP TABLES

TABLE 2-1

HYDRAULIC MONITORING NETWORK
LONG-TERM MONITORING PLAN

Well(a)	Depth (ft)	Aquifer
MW-24-1	29	Bridgeton Sand
MW-40	47	Bridgeton Sand
MW-41	46	Bridgeton Sand
MW-42	44	Bridgeton Sand
MW-20-3	63	Upper Cohansey
MW-23-2	62	Upper Cohansey
MW-25-2	60	Upper Cohansey
MW-26-2	75	Upper Cohansey
MW-29-1	65	Upper Cohansey
MW-34	70	Upper Cohansey
MW-35	68	Upper Cohansey
MW-36	72	Upper Cohansey
MW-37	74	Upper Cohansey
MW-38	74	Upper Cohansey
MW-39	76	Upper Cohansey
MW-29-2	140	Lower Cohansey
MW-31-2	130	Lower Cohansey
MW-32	130	Lower Cohansey
MW-33-2	130	Lower Cohansey

Note:

a. The hydraulic monitoring network also includes the extraction and reinjection wells.

TABLE 2-2

MONITORING SUMMARY
LONG-TERM GROUNDWATER MONITORING PLAN

Type of Monitoring	Location	Parameters	Frequency	Duration
Hydraulic Monitoring	All Extr. and Rinj., and specified MW (a)	DTW (b) & Flow Rates	Daily	1st Week
	All Extr. and Rinj., and specified MW	DTW & Flow Rates	Twice per week	Weeks 2 through 4
	All Extr. and Rinj., and specified MW	DTW & Flow Rates	Once per week (c)	Months 2 and 3 (c)
	All Extr. and Rinj., and specified MW	DTW & Flow Rates	Once per month	Months 4 through 6
	Specified MW	DTW	Once per quarter	Months 6 through Year 2
	All Extr. and Reinj.	DTW & Flow Rates	Once per month	Months 6 through Year 2
	Specified MW	DTW	Re-evaluate frequency	O & M Phase (d)
	All Extr.	Flow Rates	Re-evaluate frequency	O & M Phase (d)
	All Reinj.	DTW & Flow Rates	Re-evaluate frequency	O&M Phase (d)
Groundwater Quality (d)	Plume and Background Monitoring Wells	see Table 2-4	Semi-annually (e)	Through Year 2
	Perimeter (Sentinel) Monitoring Wells	see Table 2-4	Quarterly	Through Year 2
	Plume and Background Monitoring Wells	Re-evaluate parameters	Annually (e)	Duration of System Operation
	Perimeter (Sentinel) Monitoring Wells	Re-evaluate parameters	Semi-annually	Duration of System Operation

Notes:

a. Extr. indicates extraction well, Rinj. indicates reinjection well, and MW indicates monitoring well. Specified monitoring wells are listed on Table 2-1.

b. DTW indicates depth to water.

c. Should the system reach steady state before the third month, the frequency would be decreased to monthly.

d. Operations and Maintenance Phase

e. Should a plume well indicate contaminant levels below groundwater standards, the schedule will revert to quarterly (see Section 2.2.4) of LTGWMP.

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TABLE 2-3

GROUNDWATER QUALITY MONITORING NETWORK
LONG-TERM MONITORING PLAN

Well	Depth (ft)	Aquifer	Well Type (a)
MW-44-1	20	Bridgeton Sand	Background
MW-44-2	72	Upper Cohansey	Background
MW-20-1-R	40	Bridgeton Sand	Plume
MW-25-1-R	24	Bridgeton Sand	Plume
MW-41	46	Bridgeton Sand	Plume
MW-43	43	Bridgeton Sand	Plume
MW-20-3-R	63	Upper Cohansey	Plume
MW-24-2-R	63	Upper Cohansey	Plume
MW-28-2	93	Upper Cohansey	Plume
MW-29-2	140	Lower Cohansey	Plume
MW-31-2	130	Lower Cohansey	Plume
MW-28-1	41	Bridgeton Sand	Perimeter (Sentinel)
MW-29-1	65	Upper Cohansey	Perimeter (Sentinel)
MW-33-2 (b)	130	Lower Cohansey	Perimeter (Sentinel)

Notes:

(a) Plume wells are located in order to monitor groundwater quality within the plumes. Perimeter (or Sentinel) wells are located beyond the plumes in a down-gradient direction. (See Section 2.2.1) of LTGWMP.

(b) If water quality data from well MW-33-2 reveal exceedances of the 106 Order limits on either of two (2) successive sampling events, then a new Perimeter (or Sentinel) well would be located at a position that is farther down-gradient.

TABLE 2-4

106 ORDER
GROUNDWATER STANDARDS

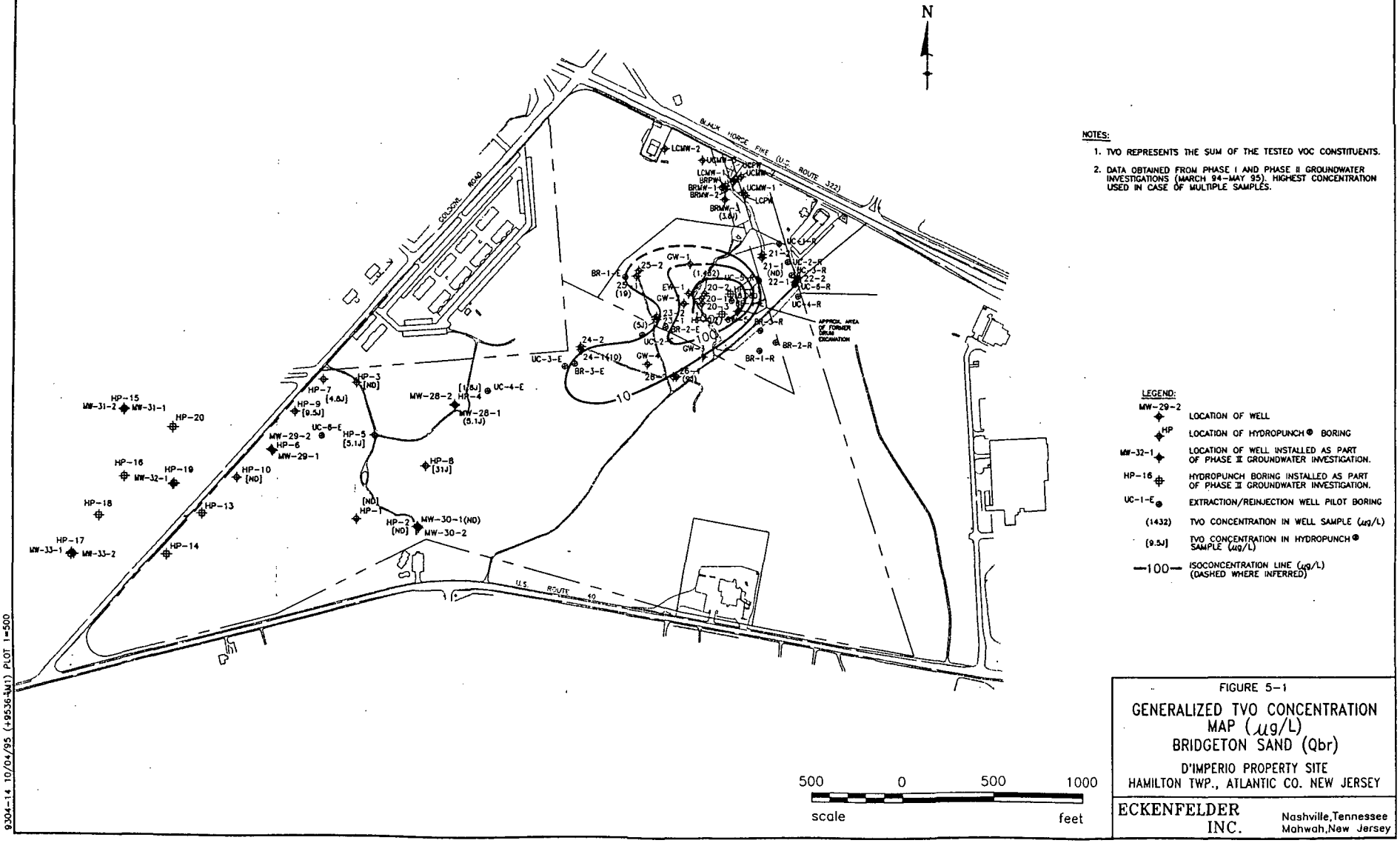
Parameter (a)	Standard (b) (μg/L)
Volatile Organic Compounds	
Benzene	5 (c)
Chlorobenzene	(c)
1,2-Dichloroethylene (total)	(c)
1,1,1-Trichloroethane	200
1,1-Dichloroethane	(c)
Chloroform	5 (c)
1,1-Dichloroethylene	5 (c)
1,2-Dichloropropane	(c)
Ethylbenzene	(c)
Methylene chloride	5 (c)
Tetrachloroethylene (Perchlorethylene)	5 (c)
Toluene	(c)
Trichloroethylene	5 (c)
2-Butanone (Methyl Ethyl Ketone)	100
1,2-Dichloroethane	5 (c)
Semi-Volatile Organic Compounds	
Phenol	300
Metals	
Arsenic	50
Chromium (total)	Background
Copper	1,000
Iron	300
Lead	50
Manganese	50
Mercury	2
Zinc	5,000
Inorganics	
Chloride	10,000
Sulfate	15,000
BOD_5	8,000 to 12,000

Notes:

(a) Only constituents with limits in the 106 Order, Attachment IV are listed.
(b) Based on 106 Order, Attachment IV limits.
(c) The sum of the listed VOCs may not exceed 50 μg/L. No compound specific limit unless otherwise noted.

ATTACHMENT 3

SITE MAPS



NOTES:

1. TVO REPRESENTS THE SUM OF THE TESTED VOC CONSTITUENTS.
2. DATA OBTAINED FROM PHASE I AND PHASE II GROUNDWATER INVESTIGATIONS (MARCH 94–MAY 95). HIGHEST CONCENTRATION USED IN CASE OF MULTIPLE SAMPLES.

LEGEND:

- MW-29-2 — LOCATION OF WELL
- HP — LOCATION OF HYDROPUNCH® BORING
- MW-32-1 — LOCATION OF WELL INSTALLED AS PART OF PHASE II GROUNDWATER INVESTIGATION.
- HP-16 — HYDROPUNCH BORING INSTALLED AS PART OF PHASE II GROUNDWATER INVESTIGATION.
- UC-1-E — EXTRACTION/REINJECTION WELL PILOT BORING
- (1432) — TVO CONCENTRATION IN WELL SAMPLE (µg/L)
- [9.5J] — TVO CONCENTRATION IN HYDROPUNCH® SAMPLE (µg/L)
- —100— ISOCONCENTRATION LINE (µg/L) (DASHED WHERE INFERRED)

9304-14 10/04/95 (+9536-M1) PLOT 1=500

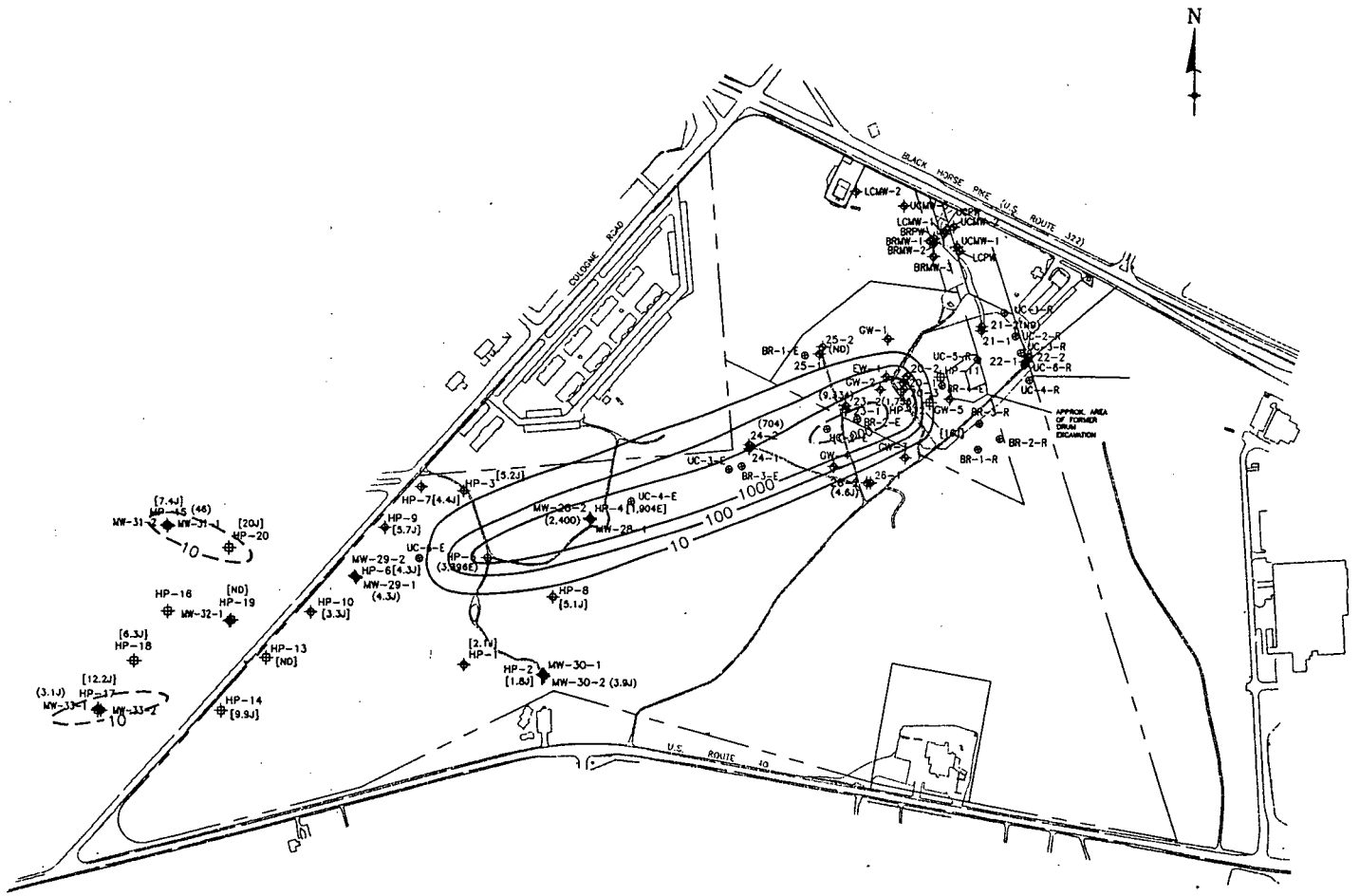
FIGURE 5-1

GENERALIZED TVO CONCENTRATION MAP (µg/L)
BRIDGETON SAND (Qbr)

D'IMPERIO PROPERTY SITE
HAMILTON TWP., ATLANTIC CO. NEW JERSEY

ECKENFELDER INC. Nashville, Tennessee Mahwah, New Jersey

503200



NOTES:

1. TVO REPRESENTS THE SUM OF THE TESTED VOC CONSTITUENTS.
2. DATA OBTAINED FROM PHASE I AND PHASE II GROUNDWATER INVESTIGATIONS (MARCH 94 – MAY 95). HIGHEST CONCENTRATION USED IN CASE OF MULTIPLE SAMPLES.

LEGEND:

- MW-29-2 — LOCATION OF WELL
- HP — LOCATION OF HYDROPUNCH® BORING
- MW-32-1 — LOCATION OF WELL INSTALLED AS PART OF PHASE II GROUNDWATER INVESTIGATION.
- HP-18 — HYDROPUNCH BORING INSTALLED AS PART OF PHASE II GROUNDWATER INVESTIGATION.
- UC-1-E — EXTRACTION/REINJECTION WELL PILOT BORING
- (1737) — TVO CONCENTRATION IN WELL SAMPLE (µg/L)
- [5.1J] — TVO CONCENTRATION IN HYDROPUNCH® SAMPLE (µg/L)
- —100— ISOCONCENTRATION LINE (µg/L) (DASHED WHERE INFERRED)

FIGURE 5-2

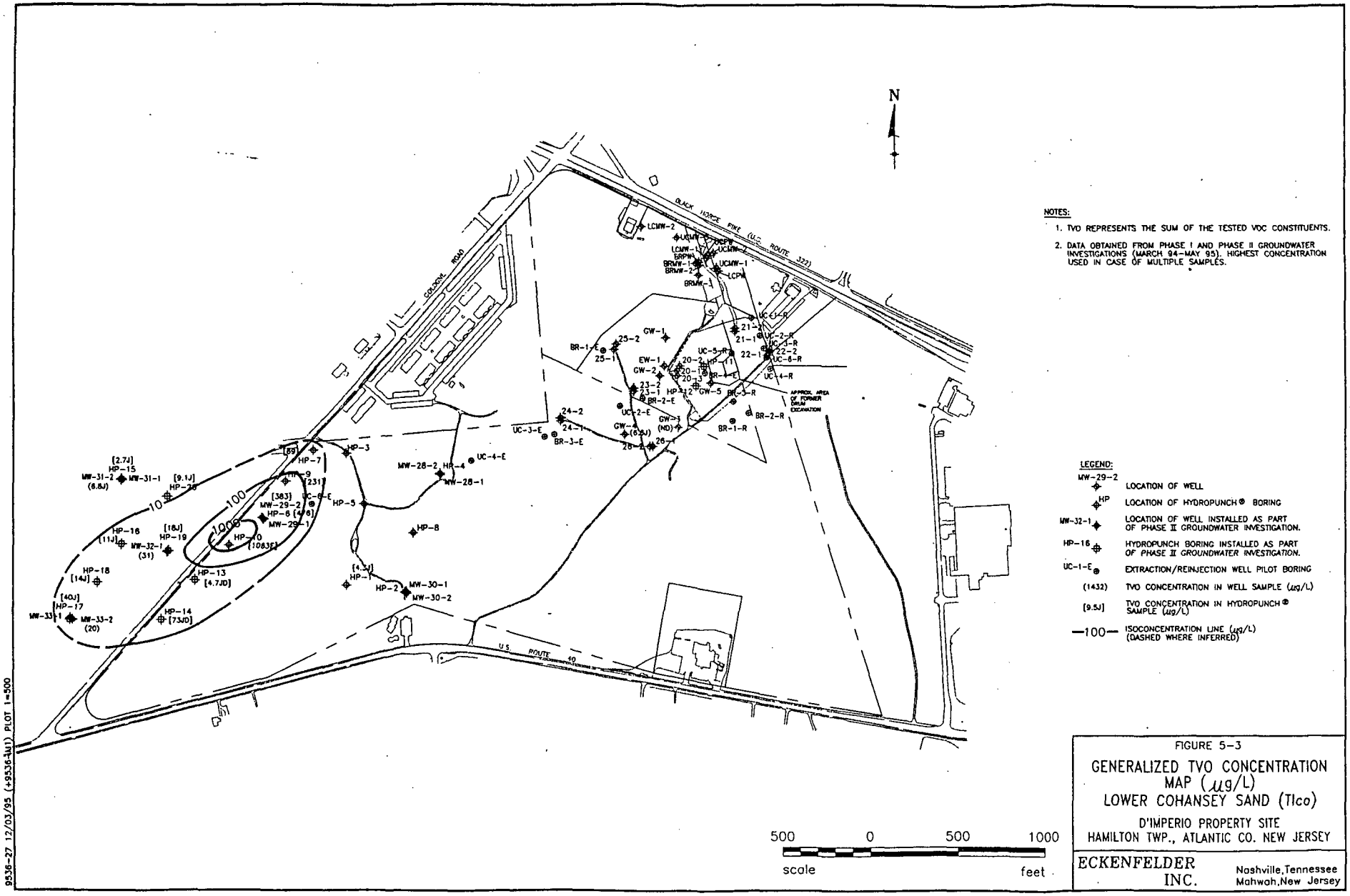
GENERALIZED TVO CONCENTRATION MAP (µg/L)
UPPER COHANSEY SAND (Tuco)

D'IMPERIO PROPERTY SITE
HAMILTON TWP., ATLANTIC CO. NEW JERSEY

ECKENFELDER INC. Nashville, Tennessee Mahwah, New Jersey

9304-15 10/04/95 (+9536-M1) PLOT 1=500

503201



NOTES:

1. TVO REPRESENTS THE SUM OF THE TESTED VOC CONSTITUENTS.
2. DATA OBTAINED FROM PHASE I AND PHASE II GROUNDWATER INVESTIGATIONS (MARCH 94–MAY 95). HIGHEST CONCENTRATION USED IN CASE OF MULTIPLE SAMPLES.

LEGEND:

- MW-29-2 — LOCATION OF WELL
- HP — LOCATION OF HYDROPUNCH® BORING
- MW-32-1 — LOCATION OF WELL INSTALLED AS PART OF PHASE II GROUNDWATER INVESTIGATION.
- HP-16 — HYDROPUNCH BORING INSTALLED AS PART OF PHASE II GROUNDWATER INVESTIGATION.
- UC-1-E — EXTRACTION/REINJECTION WELL PILOT BORING
- (1432) — TVO CONCENTRATION IN WELL SAMPLE (µg/L)
- [9.5J] — TVO CONCENTRATION IN HYDROPUNCH® SAMPLE (µg/L)
- —100— ISOCONCENTRATION LINE (µg/L) (DASHED WHERE INFERRED)

FIGURE 5-3

GENERALIZED TVO CONCENTRATION MAP (µg/L)
LOWER COHANSEY SAND (Tlco)

D'IMPERIO PROPERTY SITE
HAMILTON TWP., ATLANTIC CO. NEW JERSEY

ECKENFELDER INC. Nashville, Tennessee Mahwah, New Jersey

503202

9536-27 12/03/95 (+9536-lu1) PLOT 1=500