

E. Spike Sample Results Summary—A summary of the spike sample analysis shall be submitted. The following information shall be reported: ID number of the sample chosen for spiking, sample matrix, the concentration of each spiked target analyte, the results of the unspiked sample analysis, the results of the spiked sample analysis, the percent recovery for each spiked analyte and the QC limit for percent recovery for each spiked analyte.

F. Duplicate Sample Results Summary—A summary of the duplicate sample analysis shall be submitted. The following information shall be reported: ID number of the original sample and the duplicate samples, sample matrix, results of the original sample analysis, results of the duplicate sample analysis, the relative percent difference of each target analyte for the original duplicate sample analyses and the QC limit for relative percent difference for each target analyte.

G. Laboratory Control Sample Results Summary—When specified by the analytical method, the results of the laboratory control (quality control) sample shall be submitted. The following information shall be reported: control sample matrix, list of all target analytes, the true concentration for each analyte in the control sample, the reported concentration for each target analyte in the control sample, the percent recovery for each target analyte and the QC limit for percent recovery for each target analyte.

H. Serial Dilution Summary—If required by the analytical method, a summary of the serial dilution results shall be submitted. The following information shall be reported: ID number of the original sample and the serial dilution samples, sample matrix, results of the original sample analysis, results of the serial dilution sample analysis, the percent difference of each target analyte compared to the original analytes' results and the QC limit for percent difference for each target analyte.

## 5. General Chemistry Requirements

A. Analytical Results Summary—An analytical results form shall be submitted for each sample. Each form shall contain the following information: sample identification number (laboratory and/or field ID), sample matrix, date sample received, date sample analyzed, sample moisture content, dilution factor (if any), list of target analytes and detected analyte concentrations and method detection limits.

B. Blank Results Summary—A blank results form shall be submitted for all method blank samples associated with all field and QC samples. Each form shall contain the following information: list of all target analytes, matrix of the method blank, concentration units of the method blank, reported concentration of all target analytes found in all method blanks.

C. Spike Sample Results Summary—A summary of the spike sample analysis shall be submitted. The follow-

ing information shall be reported: ID number of the sample chosen for spiking, sample matrix, the concentration of each spiked target analyte, the results of the unspiked sample analysis, the results of the spiked sample analysis, the percent recovery for each spiked analyte and the QC limit for percent recovery for each spiked analyte.

D. Duplicate Sample Results Summary—A summary of the duplicate sample analysis shall be submitted. The following information shall be reported: ID number of the original sample and the duplicate samples, sample matrix, results of the original sample analysis, results of the duplicate sample analysis, the relative percent difference of each target analyte for the original duplicate sample analyses and the QC limit for relative percent difference for each target analyte.

## 6. Petroleum Hydrocarbon Requirements

A. Analytical Results Summary—An analytical results form shall be submitted for each sample. Each form shall contain the information contained in Section 2A above. In addition, the identification of the GC instrument employed and the volume of extract injected shall be included.

B. Method Blank Summary—An analytical results form shall be submitted for all method blanks as well as a listing of all field and QC samples associated with each method blank. Each form shall contain the information in Section 6A above.

C. Standards Summary—A summary form containing GC standards information for all associated samples shall be submitted for all analyses. This summary shall contain the following information: instrument ID number, GC column used, date and time of standard(s) analysis, volume injected, listing of all associated field, QC and method blank samples, identity of each analyte in the hydrocarbon standard and/or the identity of petroleum product standard(s), retention times of each analyte in the hydrocarbon standard (when applicable), retention times of the surrogates and internal standard (when applicable), retention times of pristane and phytane (when applicable), retention time windows for each surrogate (when applicable), response factors/relative response factors used for quantitative determinations, response factors/relative response factors of surrogates, and percent relative standard deviations/percent differences of the surrogates.

D. Surrogate Compound Recovery Results Summary—If required by the analytical method, a summary form shall be submitted which contains the following information for all field samples, method blanks, and QC samples: sample identification number, sample matrix, surrogate compound names, concentration of surrogate compounds used, surrogate compound recoveries and QC limits for each surrogate compound.

E. Matrix Spike Results Summary—If required by the analytical method, a summary form shall be submitted which contains the following information: ID number of the sample chosen for spiking, sample matrix, the concentration of each spiked analyte/petroleum product, the results of the unspiked sample analysis, the results of the spiked sample analysis, the percent recovery for each spiked analyte/petroleum product and the QC limit for percent recovery for each spiked analyte/petroleum product.

F. Quality Control Check Standard—If required by the analytical method, a summary form shall be submitted which contains the following information: ID number of the sample, concentration of each spiked analyte/petroleum product, the results of the spiked sample analysis, the percent recovery for each spiked analyte/petroleum product, and the QC limit for percent recovery for each spiked analyte/petroleum product.

G. Duplicate Sample Results Summary—A summary of the duplicate sample results shall be submitted which contains the following: ID numbers of the original sample and the duplicate sample, sample matrix, results of the original sample analysis, results of the duplicate sample analysis, the relative percent difference calculated from the original and duplicate sample results and the QC limit for the relative percent difference (when applicable).

H. Quantitation Reports—Instrument quantitation reports shall be submitted for all field samples, QC samples, method blanks and standards.

I. Chromatograms—Chromatograms for all field samples, QC samples, method blanks and standards shall be submitted. All surrogate, internal standard (when applicable), pristane and phytane peaks on the chromatogram shall be identified along with the retention time for each peak.

<sup>1</sup> A negative proof is a mass spectrum offered as evidence to support an analyst's decision to negate the presence of a contaminant which has been qualitatively identified and reported by the instrument's data system.

<sup>2</sup> Method blanks for nonaqueous samples shall consist of performing the entire analytical procedure without any actual sample being present. The appropriate amount of sodium sulfate as specified in the current Statements of Work for Organics would be substituted as the "sample" for the semivolatile and pesticide/aroclor fractions.

Amended by R.1997 d.124, effective May 19, 1997 (operative July 18, 1997).

See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).  
Rewrote IV6.

**APPENDIX B**

**Well Search Format**

Preparer

Name of Site

Program Interest Number (Preferred ID)

Street Address

Township

County

USGS Quadrangle

Latitude

Longitude

Instructions:

1. All sources of well records/information shall be clearly documented.
2. List all wells and State well permit numbers, including active, inactive and decommissioned, within ½ mile of the site boundary. Include all wells, active, inactive and decommissioned at the site.
3. Locate all listed wells on a site locus map.
4. Sources that shall be used:
  - a. Well records search of the Bureau of Water Allocation. There is no cost if this search is performed by the individual. Appointments shall be made to examine well records by contacting the Bureau of Water Allocation at (609) 292-2957. Upon written request, the Bureau will provide the well search for a fee.
  - b. Contact local or county Health Department or equivalent.
5. Complete chart on back.

Well Owner	Address	Total Depth	Length of Casing	Static Water Elev.	Use Code	Source of Information
1.						
2.						
3.						
4.						
5.						
6.						

USE CODES

A =  
 B = Boring  
 C =  
 D = Domestic  
 E = Recovery/Decontamination Pollution Control/Leachate with Pump Capacity  
 F = Fire  
 G = Irrigation  
 H = Heat Pump/Geothermal  
 I = Industrial

- J = Injection/Waste Discharge
- K =
- L = Livestock
- M = Monitoring
- N = Public Non-community
- O = Oil/Gas Exploration
- P = Public Supply
- Q = Recharge
- S = Sealed
- T = Test
- U = Non-public
- V = Gas Vent
- W = Dewatering
- X = Cancelled
- Y = Cathodic Protection
- Z = Piezometer

NEW REPLACEMENT WELL CODES

- 1 = Domestic
- 2 = Public Community
- 3 = Public Non-Community
- 4 = Industrial
- 5 = Irrigation
- 6 = Monitoring
- 7 = Piezometer
- 8 = Heat Pump/Geothermal
- 9 = Recovery
- 0 = Gas Vent

Amended by R.2003 d.29, effective February 3, 2003.

See: 34 N.J.R. 170(a), 35 N.J.R. 710(a).

In 2, substituted "decommissioned" for "abandoned"; deleted 5 and recodified former 6 as 5.

Administrative correction.

See: 35 N.J.R. 1928(a).

APPENDIX C

Mann-Whitney U-Test\*

The random variable to be analyzed shall be the concentrations of the individual contaminants of concern in each individual monitoring well. The statistic to be evaluated is the Mann-Whitney "U". The test shall be a Mann-Whitney U-test with the size of the test equal to 0.1. The hypotheses (H) to be tested are:

$$H_0: \hat{\theta}_1, \hat{\theta}_2 \text{ (null hypothesis)}$$

$$H_1: \hat{\theta}_1 > \hat{\theta}_2 \text{ (alternate hypothesis)}$$

where  $\hat{\theta}_1$  represents the stochastic size of the population of each individual contaminant during the most recent 12 month period of sampling and  $\hat{\theta}_2$  represents the stochastic size of the population of each individual contaminant during the previous 12 month period. The test is applied to each contaminant in each individual monitoring well. In other words, if benzene and trichloroethene are the contaminants of concern, and there are four monitoring wells involved in the sampling program, then a total of eight Mann-Whitney tests are to be performed (benzene in each of the four monitoring wells and trichloroethene in each of the four monitoring wells).

The U statistic shall be evaluated as follows:

1. The test is applied to eight consecutive quarters of analytical data for each individual contaminant in each individual monitoring well.

2. For each quarter of data, annotate the concentration of the specific contaminant in the specific monitoring well with either a "b" for the most recent four quarters or an "a" for the four quarters from the previous 12 month period.

3. Vertically arrange the eight contaminant concentrations, with notations, in order of increasing value: the lowest value on the top, and the greatest value on the bottom.

4. For each individual "a" concentration, count the number of "b" concentrations that occur below that "a" concentration in the column.

5. Add the four values (zero or some positive number) obtained for Step 4 to calculate the "U" value.

6. All values of non-detectable (ND) or values detected below the limits of quantitation are to be ranked as "zero." It is required that appropriate detection levels/quantitation limits be achieved.

7. If two or more concentrations are identical, then two vertical columns are necessary. In the first column, rank tying "b" concentrations first, and in the second column rank tying "a" concentrations first. Calculate an interim "U" for each column ("Ua" and "Ub"). The average of these interim values is the actual "U". This is shown in Example 2, below.

The hypotheses shall be tested as follows:

1. If "U" is three or less, the null hypothesis is rejected, and it is concluded, with at least 90 percent confidence, that the concentration for the individual contaminant has decreased with time at the specific monitoring well.

2. If "U" is greater than three, the null hypothesis is accepted, and it cannot be concluded, with 90 percent or greater confidence, that the concentration for the individual contaminant has decreased with time at the specific monitoring well.

\* Adapted from Mann, H. B. and Whitney, D.R., 1947, On a test of whether one of two random variables is stochastically larger than the other., Ann. Math. Statist., 18, pp. 52-54.

EXAMPLE 1: All data points are numerically unique

- Individual contaminant: TCE  
Individual monitoring well: MW-1
- Monitoring quarters:

	$\hat{\theta}_1$					$\hat{\theta}_2$			
Sampling Round:	1	2	3	4		5	6	7	8
Sampling Result: (ppb) (concentration)	506a	1021a	612a	265a	I	543b	261b	77b	379b

- 77b  
261b  
265a  
379b  
506a  
543b  
612a  
1021a
- 265a=2, 506a=1, 612a=0, 1021a=0
- 2+1+0+0=3, U=3

Conclusion: "U" is three, therefore the null hypothesis is rejected, and it is concluded, with 90 percent or greater confidence, that the first sampling set ( $\hat{\theta}_1$ ) is greater than the second sampling set ( $\hat{\theta}_2$ ), and therefore that the concentration for the specific contaminant in the specific monitoring well has decreased over the period of the ground water monitoring program.

#### EXAMPLE 2: two or more numerically identical data points

- Individual contaminant: TCE  
Individual monitoring well: MW-1
- Monitoring quarters:

	$\hat{\theta}_1$					$\hat{\theta}_2$			
Sampling Round:	1	2	3	4		5	6	7	8
Sampling Result: (ppb) (concentration)	28a	Nda	61a	Nda	f f f	63b	Ndb	77b	79b

- Ndb            b) Nda  
Nda            Nda  
Nda            Ndb  
28a            28a  
61a            61a  
63b            63b  
77b            77b  
79b            79b
- Nda=3, Nda=3, 28a=3, 61a=3
  - Nda=4, Nda=4, 28a=3, 61a=3
- 3+3+3+3=12    Ua=12 ==> U=13.0
  - 4+4+3+3=14    Ub=14

Conclusion: "U" is 13, therefore we accept the null hypothesis, and we cannot conclude, with 90 percent or greater confidence, that the first sampling set ( $\hat{\theta}_1$ ) is greater than the second sampling set ( $\hat{\theta}_2$ ), and we cannot conclude that the concentration for that specific contaminant has decreased with time.

New Rule, R.1997 d.124, effective May 19, 1997 (operative July 18, 1997).

See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).

#### APPENDIX D

Historic Fill Database  
Summary Table

	Minimum (ppm) <sup>1</sup>	Maximum (ppm) <sup>1</sup>	Avg (ppm) <sup>1</sup>	Number of Samples	Number > URU CDCSCC <sup>2</sup>	% > URU CDCSCC <sup>2</sup>	Number > RU CDCSCC <sup>2</sup>	% > RU CDCSCC <sup>2</sup>
B(a)A <sup>3</sup>	0.03	160.0	1.37	441	126	29	33	7
B(a)P <sup>3</sup>	0.02	120.0	1.89	431	146	34	146	34
B(b)F <sup>3</sup>	0.02	110.0	1.91	426	118	28	39	9
B(k)F <sup>3</sup>	0.02	93.0	1.79	412	101	25	26	6
I(1)P <sup>3</sup>	0.02	67.0	1.41	397	70	18	18	5
D(a)A <sup>3</sup>	0.01	25.0	1.24	286	78	27	78	27
Arsenic	0.05	1098	13.2	369	35	9	35	9
Be <sup>3</sup>	0.01	79.7	1.23	213	21	10	21	10
Cadmium	0.02	510	11.1	236	147	62	5	2
Lead	0.28	10700	574	538	259	48	119	22
Zinc	2.45	10900	575	197	80	4	8	4

1. ppm=parts per million  
 2. URU=Unrestricted Use, RU=Restricted Use, CDCSCC=Current Direct Contact Soil Cleanup Criteria  
 3. B(a)A=Benzo(a)anthracene, B(a)P=Benzo(a)pyrene, B(b)F=Benzo(b)fluorene, B(k)F=benzo(k)fluoranthene, I(1)P=Indeno(1,2,3-cd)pyrene, D(a)A=Dibenzo(a,h)anthracene, Be=Beryllium

New Rule, R.1997 d.124, effective May 19, 1997 (operative July 18, 1997).  
 See: 28 N.J.R. 1098(a), 28 N.J.R. 2298(a), 29 N.J.R. 2278(b).

Exhibit A, which is attached hereto and made a part hereof (the "Property").

APPENDIX E

MODEL DEED NOTICE

DEED NOTICE

This Deed Notice is made as of the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by [insert the full legal name and address of each current property owner](together with his/her/its/their successors and assigns, collectively "Owner").

MODEL DEED NOTICE

Matter bracketed [ ] is not intended for deletion, but rather is intended to be descriptive of the variable information that may be contained in the final document.

IN ACCORDANCE WITH N.J.S.A. 58:10B-13, THIS DOCUMENT IS TO BE RECORDED IN THE SAME MANNER AS ARE DEEDS AND OTHER INTERESTS IN REAL PROPERTY.

Prepared by: \_\_\_\_\_  
 [Signature]

\_\_\_\_\_  
 [Print name below signature]

Recorded by: \_\_\_\_\_  
 [Signature, Officer of County Recording Office]

\_\_\_\_\_  
 [Print name below signature]

1. THE PROPERTY. [Insert the full legal name and address of each current property owner] [Insert as appropriate: "is," or "are"] the owner in fee simple of certain real property designated as Block(s) \_\_\_\_\_ Lot(s) \_\_\_\_\_, on the tax map of the [Insert, as appropriate: City/Borough/Township/Town] of [Insert the name of municipality], [Insert the name of county] County; the New Jersey Department of Environmental Protection Program Interest Number (Preferred ID) for the contaminated site which includes this property is [Insert the Program Interest Number (Preferred ID)]; and the property is more particularly described in

2. DEPARTMENT'S ASSIGNED BUREAU. The [Insert name of Bureau] was the New Jersey Department of Environmental Protection program that was responsible for the oversight of the remediation of the Property. The matter was Case No. [Insert Program Interest Number (Preferred ID)].

3. SOIL CONTAMINATION. [Insert the full legal name of the person that was responsible for conducting the remediation] has remediated contaminated soil at the Property, and the New Jersey Department of Environmental Protection approved a remedial action on [Insert date of Department's approval], such that soil contamination remains in certain areas of the Property which contains contaminants in concentrations that do not allow for the unrestricted use of the Property; this soil contamination is described, including the type, concentration and specific location of such contaminants, in Exhibit B, which is attached hereto and made a part hereof. As a result, there is a statutory requirement for this Deed Notice [include if appropriate: and engineering controls] in accordance with N.J.S.A. 58:10B-13.

4. CONSIDERATION. In accordance with the New Jersey Department of Environmental Protection's approval of the remedial action work plan for the remediation of the site which included the Property, and in consideration of the terms and conditions of that approval, and other good and valuable consideration, Owner has agreed to subject the Property to certain statutory and regulatory requirements which impose restrictions upon the use of the Property, and to provide notice to subsequent owners, lessees and operators of the restrictions and the monitoring, maintenance, and biennial certification requirements outlined in this Deed Notice and required by law, as set forth herein.

5A. RESTRICTED AREAS. Due to the presence of these contaminants, the Owner has agreed, as part of the remedial action for the Property, to restrict the use of certain parts of the Property (the "Restricted Areas"); a narrative description of these restrictions, along with the associated monitoring and maintenance activities and the

biennial certification requirements are provided in Exhibit C, which is attached hereto and made a part hereof. The Owner has also agreed to maintain a list of these restrictions on site for inspection by governmental enforcement officials.

*[Insert the following paragraph when engineering controls are also implemented at the site:]*

5B. ENGINEERING CONTROLS. Due to the presence and concentration of these contaminants, the Owner has also agreed, as part of the remedial action for the Property, to the placement of certain engineering controls on the Property; a narrative description of these engineering controls, along with the associated monitoring and maintenance activities and the biennial certification requirements are provided in Exhibit C.]

6A. ALTERATIONS, IMPROVEMENTS, AND DISTURBANCES.

i. Except as provided in Paragraph 6B, below, no person shall make, or allow to be made, any alteration, improvement, or disturbance in, to, or about the Property which disturbs any engineering control at the Property without first obtaining the express written consent of the Department of Environmental Protection. Nothing herein shall constitute a waiver of the obligation of any person to comply with all applicable laws and regulations including, without limitation, the applicable rules of the Occupational Safety and Health Administration. To request the consent of the Department of Environmental Protection, contact:

- \_\_\_ Department of Environmental Protection
- \_\_\_ Division of Remediation Management and Response
- \_\_\_ Bureau of Operation, Maintenance and Monitoring
- \_\_\_ Deed Notice Inspection Program
- \_\_\_ PO Box 413
- \_\_\_ 401 E. State Street
- \_\_\_ Trenton, NJ 08625-0413

ii. Notwithstanding subparagraph 6Ai, above, the Department of Environmental Protection's express written consent is not required for any alteration, improvement, or disturbance provided that the owner, lessee or operator:

(A) Notifies the Department of Environmental Protection of the activity by calling the DEP Hotline, at 1-877 WARN-DEP or 1-877-927-6337, within 24 hours after the beginning of each alteration, improvement, or disturbance;

(B) Restores any disturbance of an engineering control to pre-disturbance conditions within 60 calendar days after the initiation of the alteration, improvement or disturbance;

(C) Ensures that all applicable worker health and safety laws and regulations are followed during the alteration, improvement, or disturbance, and during the restoration;

(D) Ensures that exposure to contamination in excess of the applicable remediation standards does not occur;

(E) Submits a written report, describing the alteration, improvement, or disturbance, to the Department of Environmental Protection within 60 calendar days after the end of each alteration, improvement, or disturbance. The owner, lessee or operator shall include in the report the nature of the alteration, improvement, or disturbance, the dates and duration of the alteration, improvement, or disturbance, the name of key individuals and their affiliations conducting the alteration, improvement, or disturbance, a description of the notice the Owner gave to those persons prior to the disturbance, the amounts of soil generated for disposal, if any, the final disposition and any precautions taken to prevent exposure. The owner, lessee, or operator shall submit the report to:

- \_\_\_ Department of Environmental Protection
- \_\_\_ Division of Responsible Party Site Remediation
- \_\_\_ Bureau of Case Management
- \_\_\_ Deed Notice Inspection Program
- \_\_\_ PO Box 028
- \_\_\_ 401 E. State Street
- \_\_\_ Trenton, NJ 08625-0028

*[Insert the following paragraph when engineering controls are also implemented at the site:]*

6B. EMERGENCIES. In the event of an emergency which presents, or may present, an unacceptable risk to the public health and safety, or to the environment, any person may temporarily breach any engineering control provided that that person complies with each of the following:

i. Immediately notifies the Department of Environmental Protection of the emergency, by calling the DEP Hotline at 1-877 WARN DEP or 1-877-927-6337;

ii. Limits both the actual disturbance and the time needed for the disturbance to the minimum reasonably necessary to adequately respond to the emergency;

iii. Implements all measures necessary to limit actual or potential, present or future risk of exposure to humans or the environment to the contamination;

iv. Notifies the Department of Environmental Protection when the emergency has ended by calling the DEP Hotline at 1-877 WARN DEP or 1-877-927-6337;

v. Restores the engineering control to the pre-emergency conditions as soon as possible, and provides a written report to the Department of Environmental Protection of such emergency and restoration efforts within 60 calendar days after completion of the restoration of the engineering control. The report must include all information pertinent to the emergency, potential discharges of contaminants, and restoration measures that were implemented, which, at a minimum, should specify: (a) the nature and likely cause of the emergency, (b) the potential discharges of or exposures to contaminants, if any, that may have occurred, (c) the measures that have been taken to mitigate the effects of the emergency on human health and the environment, (d) the measures completed or implemented to restore the engineering control, and (e) the changes to the engineering control or site operation and maintenance plan to prevent reoccurrence of such conditions in the future. The owner, lessee, or operator shall submit the report to:

- \_\_\_ Department of Environmental Protection
- \_\_\_ Division of Remediation Management and Response
- \_\_\_ Bureau of Operation, Maintenance and Monitoring
- \_\_\_ Deed Notice Inspection Program
- \_\_\_ PO Box 413
- \_\_\_ 401 E. State Street
- \_\_\_ Trenton, NJ 08625-0413

7A. MONITORING AND MAINTENANCE OF DEED NOTICE, AND PROTECTIVENESS CERTIFICATION. The persons in any way responsible, pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11a et seq., for the hazardous substances that remain at the Property, the persons responsible for conducting the remediation, the Owner, and the subsequent owners, lessees, and operators, shall monitor and maintain this Deed Notice, and certify to the Department on a biennial basis that the remedial action that includes this Deed Notice remains protective of the public health and safety and of the environment. The subsequent owners, lessees and operators have this obligation only during their ownership, tenancy, or operation. The specific obligations to monitor and maintain the deed notice shall include all of the following:

- i. Monitoring and maintaining this Deed Notice according to the requirements in Exhibit C, to ensure that the remedial action that includes the Deed Notice continues to be protective of the public health and safety and of the environment;
- ii. Conducting any additional remedial investigations and implement any additional remedial actions, that are necessary to correct, mitigate, or abate each problem related to the protectiveness of the remedial action for the site prior to the date that the certification is due to the Department

pursuant to iii, below, in order to ensure that the remedial action that includes this Deed Notice remains protective of the public health and safety and of the environment.

iii. Certify to the Department of Environmental Protection as to the continued protectiveness of the remedial action that includes this Deed Notice, on a form provided by the Department and consistent with N.J.A.C. 7:26C-1.2(a)1, every two years on the anniversary of the date the Department issued the no further action letter for the first soil remedial action that included a Deed Notice.

*[Insert the following paragraph if the soil remedial action included any engineering controls at the site:*

7B. MONITORING AND MAINTENANCE OF ENGINEERING CONTROLS AND PROTECTIVENESS CERTIFICATION. The persons in any way responsible, pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11a et seq., for the hazardous substances that remain at the Property, the person responsible for conducting the remediation, and, the Owner, and the subsequent owners, lessees, and operators, shall maintain all engineering controls at the Property and certify to the Department on a biennial basis that the remedial action of which each engineering control is a part remains protective of the public health and safety and of the environment. The subsequent owners, lessees and operators have this obligation only during their ownership, tenancy, or operation. The specific obligations to monitor and maintain the engineering controls shall include the following:

- i. Monitoring and maintaining each engineering control according to the requirements in Exhibit C, to ensure that the remedial action that includes the engineering control continues to be protective of the public health and safety and of the environment;
- ii. Conducting any additional remedial investigations and implement any additional remedial actions, that are necessary to correct, mitigate, or abate each problem related to the protectiveness of the remedial action for the Property prior to the date that the certification is due to the Department pursuant to iii, below, in order to ensure that the remedial action that includes the engineering control remains protective of the public health and safety and of the environment.

iii. Certify to the Department of Environmental Protection as to the continued protectiveness of the remedial action that includes the engineering control, on a form provided by the Department and consistent with N.J.A.C. 7:26C-1.2(a)1, every two years on the anniversary of the date the Department issued that no further action letter for the first soil remedial action that included a Deed Notice.]

8. ACCESS. The Owner and the subsequent owners, lessees and operators agree to allow the Department, its agents and representatives access to the Property to inspect

and evaluate the continued protectiveness of the remedial action that includes this Deed Notice and to conduct additional remediation to ensure the protection of the public health and safety and of the environment if persons responsible for monitoring the protectiveness of the remedial action, as described in paragraph 7, above, fail to conduct such remediation pursuant to this Deed Notice as required by law. The Owner, and the subsequent owners and lessees, shall also cause all leases, subleases, grants, and other written transfers of an interest in the Restricted Areas to contain a provision expressly requiring that all holders thereof provide such access to the Department.

9. NOTICES.

i. The Owner and the subsequent owners and lessees, shall cause all leases, grants, and other written transfers of an interest in the Restricted Areas to contain a provision expressly requiring all holders thereof to take the Property subject to the restrictions contained herein and to comply with all, and not to violate any of the conditions of this Deed Notice. Nothing contained in this paragraph shall be construed as limiting any obligation of any person to provide any notice required by any law, regulation, or order of any governmental authority.

ii. Owner and all subsequent owners and lessees shall notify any person intending to conduct invasive work or excavate within the Restricted Areas at the Property, including, without limitation, tenants, employees of tenants, and contractors of the nature and location of contamination in the Restricted Areas and, of the precautions necessary to minimize potential human exposure to contaminants.

iii. The Owner and the subsequent owners shall provide written notice to the Department of Environmental Protection at least 30 calendar days before the effective date of any conveyance, grant, gift, or other transfer, in whole or in part, of the owner's interest in the Restricted Area.

iv. The Owner and the subsequent owners shall provide written notice to the Department within 30 calendar days following the owner's petition for or filing of any document initiating a rezoning of the Property. The Owner and the subsequent owners shall submit the written notice to:

- \_\_\_Department of Environmental Protection
- \_\_\_Division of Remediation Management and Response
- \_\_\_Bureau of Operation, Maintenance and Monitoring
- \_\_\_Deed Notice Inspection Program
- \_\_\_PO Box 413
- \_\_\_401 E. State Street
- \_\_\_Trenton, NJ 08625-0413

10. ENFORCEMENT OF VIOLATIONS.

i. This Deed Notice itself is not intended to create any interest in real estate in favor of the Department of Environmental Protection, nor to create a lien against the Property, but merely is intended to provide notice of certain conditions and restrictions on the Property and to reflect the regulatory and statutory obligations imposed as a conditional remedial action for this site.

ii. The restrictions provided herein may be enforceable solely by the Department against any person who violates this Deed Notice. To enforce violations of this Deed Notice, the Department may initiate one or more enforcement actions pursuant to N.J.S.A. 58:10-23.11u and require additional remediation and assess damages pursuant to N.J.S.A. 58:10-23.11g.

11. SEVERABILITY. If any court of competent jurisdiction determines that any provision of this Deed Notice requires modification, such provision shall be deemed to have been modified automatically to conform to such requirements. If a court of competent jurisdiction determines that any provision of this Deed Notice is invalid or unenforceable and the provision is of such a nature that it cannot be modified, the provision shall be deemed deleted from this instrument as though the provision had never been included herein. In either case, the remaining provisions of this Deed Notice shall remain in full force and effect.

12. SUCCESSORS AND ASSIGNS. This Deed Notice shall be binding upon Owner and upon Owner's successors and assigns, and subsequent owners, lessees and operators while each is an owner, lessee, or operator of the Property.

13. MODIFICATION AND TERMINATION.

i. Any person may request in writing, at any time, that the Department modify this Deed Notice where performance of subsequent remedial actions, a change of conditions at the Property, or the adoption of revised remediation standards suggest that modification of the Deed Notice would be appropriate.

ii. Any person may request in writing, at any time, that the Department terminate this Deed Notice because the conditions which triggered the need for this Deed Notice are no longer applicable.

iii. This Deed Notice may be revised or terminated only upon filing of an instrument, executed by the Department, in the office of the [Inserts as appropriate the County Clerk/Register of Deeds and Mortgages] of [Insert the name of the County] County, New Jersey, expressly modifying or terminating this Deed Notice.

14A. EXHIBIT A. Exhibit A includes the following maps of the Property and the vicinity:

i. Exhibit A-1: Vicinity Map—A map that identifies by name the roads, and other important geographical features in the vicinity of the Property (for example, Hagstrom County Maps);

ii. Exhibit A-2: Metes and Bounds Description—A metes and bounds description of the Property, including reference to tax lot and block numbers for the Property;

iii. Exhibit A-3: Property Map—A scaled map of the Property, scaled at one inch to 200 feet or less, and if more than one map is submitted, the maps shall be presented as overlays, keyed to a base map; and the property map shall include diagrams of major surface topographical features such as buildings, roads, and parking lots.

14B. EXHIBIT B. Exhibit B includes the following descriptions of the Restricted Areas:

i. Exhibit B-1: Restricted Area Map—A separate map for each restricted area that includes:

(A) As-built diagrams of each engineering control, including caps, fences, slurry walls, groundwater monitoring wells, and groundwater pumping system;

(B) As-built diagrams of any buildings, roads, parking lots and other structures that function as engineering controls; and

(C) Designation of all soil and sediment sample locations within the restricted areas that exceed any soil or sediment standard that are keyed into one of the tables described in the following paragraph.

ii. Exhibit B-2: Restricted Area Data Table—A separate table for each restricted area that includes:

(A) Sample location designation from Restricted Area map (Exhibit B-1);

(B) Sample elevation based upon mean sea level;

(C) Name and chemical abstract service registry number of each contaminant with a concentration that exceeds the unrestricted use standard;

(D) The restricted and unrestricted use standards for each contaminant in the table; and

(E) The remaining concentration of each contaminant at each sample location at each elevation (or if historic fill, include data from the Department's default concentrations at N.J.A.C. 7:26E-4.6, Table 4-2).

14C. EXHIBIT C. Exhibit C includes narrative descriptions of the institutional controls [*Insert as appropriate:* and engineering controls] as follows:

i. Exhibit C-1: Deed Notice as Institutional Control: Exhibit C-1 includes a narrative description of the restriction and obligations of this Deed Notice that are in addition to those described above, as follows:

(A) General Description of this Deed Notice:

(1) Description and estimated size of the Restricted Areas as described above;

(2) Description of the restrictions on the Property by operation of this Deed Notice; and

(3) The objective of the restrictions;

(B) Description of the monitoring necessary to determine whether:

(1) Any disturbances of the soil in the Restricted Areas did not result in the unacceptable exposure to the soil contamination;

(2) There have been any land use changes subsequent to the filing of this Deed Notice or the most recent biennial certification, whichever is more recent;

(3) The current land use on the Property is consistent with the restrictions in this Deed Notice;

(4) Any newly promulgated or modified requirements of applicable regulations or laws apply to the site; and

(5) Any new standards, regulations, or laws apply to the site that might necessitate additional sampling in order to evaluate the protectiveness of the remedial action which includes this Deed Notice, and conduct the necessary sampling; and

(C) Description of the following items that will be included in the biennial certification:

(1) A monitoring report that describes the specific activities, pursuant to (A) and (B), above, conducted in support of the biennial certification of the protectiveness of the remedial action that includes this Deed Notice;

(2) Land use at the Property is consistent with the restrictions in this Deed Notice; and

(3) The remedial action that includes this Deed Notice continues to be protective of the public health and safety and of the environment.

*[Insert the following if engineering controls are part of the remedial action for the site:]*

ii. Exhibit C-2: [*Insert the name of the first engineering control*]; Exhibit C-2 includes a narrative description of [*Insert the name of the first engineering control*] as follows:

(A) General Description of the engineering control:

- (1) Description of the engineering control;
- (2) The objective of the engineering control; and
- (3) How the engineering control is intended to function.

(B) Description of the operation and maintenance necessary to ensure that:

- (1) Periodic inspections of each engineering control are performed in order to determine its integrity, operability, and effectiveness;
- (2) Each engineering control continues as designed and intended to protect the public health and safety and the environment;
- (3) Each alteration, excavation or disturbance of any engineering control is timely and appropriately addressed to maintain the integrity of the engineering control;
- (4) This engineering control is being inspected and maintained and its integrity remains so that the remedial action continues to be protective of the public health and safety and of the environment;
- (5) A record of the self-inspection dates, name of the inspector, results of the inspection and condition(s) of this engineering control. Sampling, for example, may be necessary if it is not possible to visually evaluate the integrity/performance of this engineering control; and
- (6) Any new standards, regulations, or laws apply to the site that might necessitate additional sampling in order to evaluate the protectiveness of the remedial action which includes this Deed Notice, and conduct the necessary sampling; and

(C) Description of the following items that will be included in the biennial certification:

- (1) A monitoring report that describes the specific activities, pursuant to (A) and (B), above, conducted in support of the biennial certification of the protectiveness of the remedial action that includes this Deed Notice;
- (2) The engineering controls continue to operate as designed; and
- (3) The remedial action that includes the engineering control continues to be protective of the public health and safety and of the environment.

[Repeat the contents of Exhibit C-2, renumbering accordingly, for each separate engineering control that is part of the remedial action for the site.]

15. SIGNATURES. IN WITNESS WHEREOF, Owner has executed this Deed Notice as of the date first written above.

[If Owner is an individual]  
WITNESS:

_____	_____
[Signature]	[Print name below signature]
[If Owner is a corporation]	
ATTEST:	[Name of corporation]
_____	By _____

_____	_____
[Print name and title]	[Signature]
[If Owner is a general or limited partnership]	
WITNESS:	[Name of partnership]
_____	By _____
	_____, General Partner

_____	_____
[Signature]	[Print name]
[If Owner is an individual]	
STATE OF [State where document is executed]	

SS.:  
COUNTY OF [County where document is executed]

I certify that on \_\_, 20\_\_, [Name of Owner] personally came before me, and this person acknowledged under oath, to my satisfaction, that this person [or if more than one person, each person]

- (a) Is named in and personally signed this document; and
- (b) Signed, sealed and delivered this document as his or her act and deed.

_____	Notary Public
_____	[Print name and title]

[If Owner is a corporation]	
STATE OF [State where document is executed]	
	SS.:
COUNTY OF [County where document is executed]	

I certify that on \_\_, 20\_\_, [Name of person executing document on behalf of Owner] personally came before me, and this person acknowledged under oath, to my satisfaction, that:

- (a) This person is the [secretary/assistant secretary] of [Owner], the corporation named in this document;
- (b) This person is the attesting witness to the signing of this document by the proper corporate officer who is the [president/vice president] of the corporation;
- (c) This document was signed and delivered by the corporation as its voluntary act and was duly authorized;
- (d) This person knows the proper seal of the corporation which was affixed to this document; and
- (e) This person signed this proof to attest to the truth of these facts.

[Signature]
[Print name and title of attesting witness]
Signed and sworn before me on \_\_\_\_\_,
20 \_\_\_\_
\_\_\_\_\_, Notary Public
[Print name and title]

[If Owner is a partnership]
STATE OF [State where document is executed]
COUNTY OF [County where document is executed] SS.:

I certify that on \_\_, 20\_\_, [Name of person executing document on behalf of Owner] personally came before me, and this person acknowledged under oath, to my satisfaction, that this person:

- (a) Is a general partner of [Owner], the partnership named in this document;
(b) Signed, sealed and delivered this document as his or her act and deed in his capacity as a general partner of [owner]; and
(c) This document was signed and delivered by such partnership as its voluntary act, duly authorized.

[Signature]
\_\_\_\_\_, General Partner
[Print name]
\_\_\_\_\_, Notary Public
[Print name and title]

Repeal and New Rule, R.2003 d.29, effective February 3, 2003.
See: 34 N.J.R. 170(a), 35 N.J.R. 710(a).
Administrative correction.
See: 35 N.J.R. 1928(a), 36 N.J.R. 3277(a).
Petition for Rulemaking.
See: 36 N.J.R. 2947(a), 2947(b), 3305(a).

APPENDIX F

GROUNDWATER CLASSIFICATION EXCEPTION AREA FACT SHEET

A. SITE INFORMATION

- 1. Program's Site Identification Number: \_\_\_\_\_
2. Program Interest Number (Preferred ID): \_\_\_\_\_
3. Program Interest Name: \_\_\_\_\_
4. Street address: \_\_\_\_\_
5. City: \_\_\_\_\_
6. County: \_\_\_\_\_
7. Block and Lots of the site (duplicate if the site is located in more than one municipality):
a. Name of the municipality in which the site is located: \_\_\_\_\_
b. Block and Lots: \_\_\_\_\_
c. Year of tax map: \_\_\_\_\_
8. United States Geological Survey Quadrangle map, indicating the location of the site, presented as Exhibit A.
9. Site Contact:

- a. Name of contact person: \_\_\_\_\_
b. Company name: \_\_\_\_\_
c. Mailing address: \_\_\_\_\_
d. Phone number: (\_\_\_\_) \_\_\_\_\_

B. PROPOSED CLASSIFICATION EXCEPTION AREA INFORMATION

- 1. Narrative description of proposed classification exception area:
2. Location of proposed classification exception area (duplicate if the site is located in more than one municipality):
a. Name of the municipality in which the site is located: \_\_\_\_\_
b. Block and Lots: \_\_\_\_\_
c. Year of tax map: \_\_\_\_\_
3. Affected aquifer(s):
Aquifer Name Vertical Depth Groundwater Classification

Table with 4 columns: Contaminant, Concentration1, GWQS2, SWQS3

- 5. Proposed classification exception area boundaries:
Horizontal: Scaled map indicating projected areal extent of proposed classification exception area, as well as location of site, presented as Exhibit B.
Vertical: As stated in B.3., above.
Locational coordinates of boundary of proposed classification exception area as New Jersey State Plane Coordinates. A minimum of four coordinates shall be submitted, in a format compatible with Department's geographic information system:

Table with 2 rows: (New Jersey State Plane Coordinates) with columns Northing, Easting, Latitude, Longitude

- 6. Estimated size of the proposed groundwater classification exception area: \_\_\_\_\_
7. Projected duration and expiration date of the proposed classification exception area:
a. Duration (in years and or days): \_\_\_\_\_
b. Expiration date (as calendar date): \_\_\_\_\_

1Maximum concentration detected at the time Classification Exception Area information submitted to the Department.
2New Jersey Ground Water Quality Standards, N.J.A.C. 7:9-6.
3New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B.

New Rule, R.2003 d.29, effective February 3, 2003.
See: 34 N.J.R. 170(a), 35 N.J.R. 710(a).
Administrative correction.
See: 35 N.J.R. 1928(a).

APPENDIX G

CONTOUR MAP REPORTING FORM

This reporting form shall accompany each groundwater contour map submittal. Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling event? Yes\_\_\_ No\_\_\_. If yes, attach new "Well Certification—Form B—Location Certification" as found in the "Guide for the Submission of Remedial Action Workplans" (NJDEP, March 1995) and identify the reason for the elevation change (damage to casing, installation of recovery system in monitoring well, etc.).

2. Are there any monitor wells in unconfined aquifers in which the water table elevation is higher than the top of the well screen? Yes\_\_\_ No\_\_\_. If yes, identify these wells.

3. Are there any monitor wells present at the site but omitted from the contour map? Yes\_\_\_ No\_\_\_. Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

4. Are there any monitor wells containing separate phase product during this measuring event? Yes\_\_\_ No\_\_\_. Were any of the monitor wells with separate phase product included in the groundwater contour map? Yes\_\_\_ No\_\_\_. If yes, show the formula used to correct the water table elevation.

5. Has the groundwater flow direction changed more than 45 degrees from the previous groundwater contour map? Yes\_\_\_ No\_\_\_. If yes, discuss the reasons for the change.

6. Has groundwater mounding and/or depressions been identified in the groundwater contour map? Yes\_\_\_ No\_\_\_. Unless the groundwater mounds and/or depressions are caused by the groundwater remediation system, discuss the reasons for this occurrence.

7. Are all the wells used in the contour map screened in the same water-bearing zone? Yes\_\_\_ No\_\_\_. If no, justify inclusion of those wells.

8. Were the groundwater contours computer generated\_\_\_, computer aided\_\_\_, or hand-drawn\_\_\_? If computer aided or generated, identify the interpolation method(s) used.

New Rule, R.2003 d.29, effective February 3, 2003.  
See: 34 N.J.R. 170(a), 35 N.J.R. 710(a).