SITE REMEDIATION NEWS

July 2000 Volume 12 Number 1

Biennial Requirements for Deed Notices and Engineering Controls

By: Gerald M. Hahn and Kevin F. Kratina
Bureau of Underground Storage Tanks

As a result of the January 6, 1998 "Brownfield and Contaminated Site Remediation Act" N.J.S.A. 58:10B-1 et seq., specifically N.J.S.A. 58:10B-13.1a(2)(a), "a covenant not to sue shall contain the following, as applicable: a provision requiring periodic monitoring for compliance, and submit to the Department, on a biennial basis (every two years), a certification that the engineering and institutional controls are being properly maintained and continue to be protective of public health and safety and of the environment. The biennial certification shall state the underlying facts and shall include the results of any tests or procedures performed that support the certification…".

Due to this statutory requirement, the Department began issuing No Further Action\Convenant Not to Sue letters with an institutional control (i.e. a Classification Exception Area and/or Deed Notice) that contain a condition requiring biennial certifications attesting to the periodic monitoring and protectiveness of the controls. A covenant not to sue is included in each no further action letter issued for an area of concern or a full site. **As a condition of the No Further Action\Convenant Not to Sue letters, and in order to maintain the benefit of the Covenant Not to Sue**, the engineering and institutional controls must be evaluated **every two years** to insure these measures remain protective. For the purposes of this article, biennial requirements for Deed Notices will only be discussed at this time. Additional information regarding Classification Exception Area biennial certification requirements will be presented in future articles.

The Brownfield Amendments to the Technical Requirements for Site Remediation codified the biennial certification requirements at N.J.A.C. 7:26E-6.4 (g). This guidance is intended to assist in meeting those requirements.

Please note that the procedures below are easy to accomplish if land and resource uses have not changed in and around the institutional controls. If land and resource uses change for a parcel of property, inclusive of a Deed Notice, the person(s) responsible must demonstrate within the biennial certification that these changes remain protective of public health and safety and of the environment.

One of the more frequently asked questions is who has the obligation to monitor for compliance and submit the biennial certification to the Department when an institutional control is part of a remedial action for a contaminated site? The person(s) responsible for complying with these provisions include: (1) the person who undertook the remediation, whether that person is a responsible party or an innocent purchaser, pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11g, or any other person (e.g., non-owner developer); (2) the owner at the time the Department issues the no further action letter, and (3) any subsequent owner, lessee or operator of the site at the time that the biennial certification is required (hereinafter collectively referred to as "persons responsible").

Another frequently asked question is what is required in a biennial certification to ensure that a remedial action with a deed notice remains protective of the public health and safety and of the environment?

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Biennial Requirements for Deed Notices and Engineering Controls (continued)

Deed Notice

A deed notice is required when contaminated soils are present at a site above the Residential Direct Contact Soil Cleanup Criteria before the issuance of the No Further Action\Covenant Not to Sue letter. If a property is sold, the deed notice will provide notice to subsequent owners and other prospective users (i.e. lessee's, etc.). The deed notice will provide information regarding the site, presence of contaminants and any compliance monitoring requirements. The requirements may include; but not limited to; cap maintenance, inspection requirements and notification requirements, etc. In order to comply with the biennial certification, the person responsible for monitoring the institutional control must certify:

- ❑ That the deed notice has been properly filed and remains on file with the office of the county recording officer and no subsequent notices have been filed to nullify the original notice;
- ❑ That the land use **is consistent with the use restrictions** identified in the deed notice; The person responsible submitting the information must ensure that land use did not change in a manner that may create an unacceptable exposure. Current land use and any land use changes subsequent to the issuance of the No Further Action\Covenant Not to Sue shall be reported. For example, it is acceptable for a commercial property to be redeveloped for residential use after the No Further Action\Covenant Not to Sue. However, it must be demonstrated that the protectiveness of any existing engineering controls (i.e., soil cap, etc.) are not breached so that protection of public health and safety and of the environment are not compromised.
- ❑ That any excavation or disturbance that has taken place within the restricted area(s) enumerated in the deed notice, since the last biennial certification, do not, or did not present an unacceptable risk to the public health and safety or the environment. The Department shall be advised in the biennial certification if any excavation\disturbance activities have taken place within the restricted areas. The nature of any disturbance, dates and duration of the disturbance, name of individual and their affiliation conducting the disturbance, notifications made to that party, amounts of soil generated for disposal, final disposition and any precautions taken to prevent exposure shall be reported.
- ❑ That any engineering controls (i.e., caps, fencing, slurry walls, etc.) are being inspected and maintained and their integrity remains so that the remedial action continues to be protective of the public health and safety and of the environment. The biennial certification shall include a record of the self-inspection dates, name of the inspector, results of the inspection and condition(s) of the engineering control. Sampling, for example, may be necessary if it is not possible to visually evaluate the integrity/ performance of the engineering control such as in the case of a slurry wall.

General Information:

Please be sure to include the box number on all mail addressed to the Industrial Site Evaluation Element. Some mail has been received by the element many weeks past the date on the correspondence, due to the omission of the box number. The proper way to address mail to the element is:

Section Name or Case Manager's Name
Industrial Site Evaluation Element
PO Box 028
Trenton, New Jersey 08625-0028

SITE REMEDIATION NEWS

State of New Jersey
Department of Environmental Protection
Division of Publicly Funded Site Remediation
PO Box 413
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New Jersey Department of Environmental Protection

Guidance for
DEED NOTICE & ENGINEERING CONTROL BIENNIAL CERTIFICATION FORM

Revision Date: June 12, 2000 DNG-001

The purpose of this guidance form is to facilitate compliance with the continuing obligations that certain persons have (i.e., "persons responsible", see below) concerning engineering and institutional controls that are part of a cleanup of a contaminated site. The Technical Requirements for Site Remediation (see, N.J.A.C. 7:26E-6.4(g)) require the persons responsible to maintain the engineering and institutional controls that are part of a remedial action for a contaminated site to: **(1) maintain those controls, (2) perform periodic monitoring for compliance, and (3) submit biennial certifications to the Department that the engineering and institutional controls are being properly maintained and continue to be protective of public health and safety and of the environment.** The benefits of the Department's Covenant Not to Sue, for a site, may not be maintained if these biennial certifications are not made. These biennial certifications must also state the underlying facts and include the results of any tests or procedures performed to support the certification.

Please note the regulations listed below are applicable to all sites utilizing engineering and institutional controls. Copies of these regulations may be obtained by contacting the:

New Jersey Office of Administrative Law Publications
P.O. Box 049
Trenton, New Jersey 08625
Telephone # (609) 588-6606

Or by logging onto our web site at:

www.state.nj.us\dep\srp

Please refer to the complete regulations for specific requirements and or revisions. The applicable regulations include, but are not limited to:

Technical Requirements for Site Remediation—N.J.A.C. 7:26E 6.4g Post-Remedial Action Requirements

Biennial Certification
Pursuant to N.J.A.C. 7:26E-6.4(g)4., the first biennial certification is due **every two years** from the date the institutional control was stamped and filed with the County Clerk. If No Further Action/Covenant Not to Sue letters were issued at different times for one or more areas of concern at the same site, the biennial certification may be combined and is due the same day the first No Further Action/Covenant Not to Sue letter was issued. The information required for the biennial certification shall be accompanied by the certifications required in N.J.A.C. 7:26C-1.2 (a)1. Checklists (as follows) have been prepared to assist in the preparation of the biennial certifications.

Submission of Sampling Data
Please note that any sampling data associated with a previously closed case shall be accompanied by a Memorandum of Agreement (MOA) pursuant to NJAC 7:26C-3.2. The data shall be submitted in an electronic format pursuant to NJAC 7:26E-6.4(g)4. Also, the certification, checklist and any additional information shall be submitted in an electronic copy (for acceptable formats seeWWW.STATE.NJ.US/DEP/SRP).

Person Responsible
The person(s) responsible for complying with these provisions include: (1) the person who undertook the remediation, whether that person is a responsible party or an innocent owner, pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11g, or any other person (non-owner developer); (2) the owner at the time the Department issues the no further action letter, and (3) any subsequent owner, lessee or operator of the site at the time that the biennial certification is required.

The Biennial Certification Form shall be Submitted To:

If a No Further Action/Covenant Not to Sue letter has been issued, this information shall be submitted every two years to:

Department of Environmental Protection
Division of Responsible Party Site Remediation
Bureau of Case Management – Attention: Deed Notice Inspection Manager
P.O. Box 028
401 E. State Street
Trenton, NJ 08625

Or

If an No Further Action\Covenant Not to Sue has been issued for an area of concern(s) prior to the conclusion of the case then submit this information to your assigned case manager.

DEED NOTICE & ENGINEERING CONTROL BIENNIAL CERTIFICATION FORM INSTRUCTIONS

Revision Date: June 12, 2000 DNG-001

Note: Please review the sample document thoroughly in order to assist you in completing the biennial certification form correctly. Guidance and examples are identified in ***bold, italics, and underlined***. Please be advised a Certification Form must be completed for each individual property as it appears within the original Deed Notice.

I. GENERAL INFORMATION

A. Site Location:

Site Name as it appears on the Deed Notice**:** ***Rusty's Scrap Metal***

Site Street Address: ***126 Copper Street***

Municipality: ***Any City*** County: ***Any County*** Telephone Number: ***To be completed if telephone is present at the subject property.***

Block(s) : ***1B*** Lot(s): ***11 and 12***

B. Person submitting Biennial Certification:

Name of Person: ***Ms. I. M. Responsible***

Title: ***Property Owner*** Affiliation (i.e., business, etc.): ***Owner of Haveto Maintainit, Inc.***

Street Address: ***156 Confirmit Street***

City: ***Any City*** State: ***Any State*** Zip Code: ***00000*** Telephone Number: ***(555) 000-0000***

C. Case And Remedial Action Information (as applicable):

The following are to be completed as appropriate: For example if the Deed Notice was part of an Underground Storage Tank case only an ISRA I. D. Number would not be required. All categories have been completed as examples.

Known Contaminated Site List Number (mandatory): ***NJL555555555*** (12 characters)

ISRA I.D. Number (if applicable): ***E95555***

Case Number (Incident Report #, if applicable): ***99 - 10 - 10 - 1000 - 10*** (10 or 12 digits)

UST Registration Number (if applicable): ***0055555*** (7 digits)

Date Deed Notice was filed in the office of the county recording officer: ***12/03/99***

Has the Department established a Classification Exception Area as part of the remediation of the site?
Yes ***x*** No _____

If yes, provide the date that the Classification Exception Area Biennial Certification Form is due to be submitted?
3/3/00

II DEED NOTICE

A. Deed Notice:

This information is required to identify the individual who has personally visited the office of the county recording officer and confirmed that the Deed Notice is present and has been properly filed.

- On what date was the Deed Notice and all referenced Exhibits been located in the office of the county recording officer (must be within six months prior to the date biennial certification is submitted): ***5/20/00***

- Information on individual who checked for filing of Deed Notice as indicated above:

Name of Person: ***Mr. Look Intoit***

Title: ***Vice President*** Affiliation (i.e., business, etc.): ***Rusty's Scrap Metal***

Street Address: ***126 Copper Street***

City: ***Any City*** State: ***Any State*** Zip Code: ***00000-0000*** Telephone Number: ***(555) 000-0000***

- Have any amendments and or additional filings been recorded that may modify, nullify or supersede the Deed Notice and Exhibits? ***If you answered no to this question then you are declaring that the intent of the Deed Notice has not been altered in any fashion. However, if you checked " yes" you must correct the problem and explain how this was accomplished within the referenced biennial certification.***
Yes ***x*** No _____

If you answered "Yes", explain how you corrected the problem. ***If the Deed Notice is missing has been altered, or additional filings have modified the intent of the Deed Notice the person responsible undertaking this task must take measures to re-establish the intent. Example A: The Deed Notice was missing at the time the office of the county recording officer was visited. Property owner was notified. Property owner refiled Deed Notice prior to submission of this biennial certification report. Copy is attached providing proof of filing.***

Example B: The owner, without consent by the Department refiled a second Deed Notice which appeared or attempted to remove or alter the restrictions of the original Deed Notice. Prior to submission of this report the owner refiled a third Deed Notice, with the Department's approval which reinstates the original Deed Notice and Exhibits. Copy is attached providing proof of filing.

B. Land Use:

- Land use at the time the deed notice was filed (Circle all that apply): (**Non-Residential**) Residential Other _____
- Current land use (Circle all that apply): Non-Residential (**Residential**) Other _____

If the land use, at the time the Deed Notice was filed, was Non-Residential and the current land use is Residential explain how the remedial action, which included the Deed Notice, remains protective of public health and safety. Include the case manager's name that approved this change, as applicable.

_____
_____
_____

C. Disturbance of Restricted Area:

- Has any disturbance of the engineering control taken place within the restricted area(s), enumerated in the deed notice, since the last biennial certification or No Further Action letter, whichever is more recent?
  Yes ***x*** No _____
- If yes, explain. ***A line was trenched to replace an existing water supply line. This excavation was approximately two feet wide by three feet in depth. The excavation began at the corner of Copper Street and Mine Avenue and ran fifty feet in a southwest direction to the front wall of the existing office building. A field engineer was on-site to field screen the contamination. The soil was loaded directly into trucks for off-site disposal (see attached map).***
- Date(s) of Disturbance: ***3/21/00 through 3/23/00***
- Duration of Disturbance: years _____ months _____ days ***3***
- Individual responsible for conducting the disturbance:

  Contact Person: ***Mr. ABC Contractor***

  Title: ***President*** Affiliation (i.e., business, etc.): ***ABC Contracting***

  Street Address: ***126 Construction Road***

  City: ***Any City*** State: ***Any State*** Zip Code: ***00000-0000*** Telephone Number: ***(555) 000-0000***
- Provide date(s) notification(s) were made to that party.
  _____
- Was all soil excavated and returned to the restricted area?
  Yes _____ No ***x*** (If no explain) _
  Eleven cubic yards of soil were properly disposed of off-site at Your Town Landfill. Eleven cubic yards of clean fill were brought in to backfill the excavation. (See attached waste disposal manifests and a certification as to the origin of the clean fill material).
- Quantity of soil generated for disposal (if applicable): _____tons ***11***cu. yd(s).
  Attach Transportation/disposal documentation
- State precautions taken during above activities to prevent contaminant exposure: ***A field engineer was on-site to field screen the surrounding area. Temporary fencing was erected to cordon off the immediate area. All on-site personnel, associated with the activity were notified of the existence of the contamination and were suited in Level B protection.***
- If applicable, was the engineering control replaced following the disturbance?
  Yes ***x*** No _____ N/A _____

III. ENGINEERING CONTROL(s)

A. Engineering Control(s) (as applicable):

- Is there one or more engineering controls referenced in the Deed Notice?
  Yes __x__ No _____

- If you answered "Yes" to the previous question please complete below (for each engineering control copy this sheet and attach separate sheets as necessary)

  List and describe each engineering control. (i.e., soil/vegetative cap, other cap, fencing, slurry walls, etc.): ***Eighty-five percent of the property is capped with asphalt. The remainder of the property is covered with existing warehouses of which the floors are covered with concrete. The entire property is fenced. The property is fenced and locked during evening hours. (See attached map)***
  Describe the periodic monitoring and maintenance that is necessary to ensure that each engineering control continues to operate as designed in order to be protective of the public health and safety and of the environment:
  The entire fence perimeter is inspected and repaired, if necessary, every two months. The asphalt is inspected for cracks once a year and sealed if cracks are greater than ½" in width.

B. Engineering/Institutional Control(s) (as applicable):

Attach or describe here, the records of the self-inspections, dates of the inspections, name of the inspector, inspection results, maintenance records, and current condition of the engineering control: ***Please see attached inspections reports for maintenance and inspection records. Note full time security guard has completed the fence inspections and have signed off on the report. Property Superintendent has inspected the condition of the asphalt paving and the interior building floors. Patching has been completed as per the report. Fence and cap integrity is maintained as per the referenced Deed Notice.***

- Are all institutional and engineering controls (as applicable) operating as designed and intended to ensure protection of public health and safety and of the environment?
  Yes __x__ No _____

  If you answered "Yes" to the previous questions describe here and attach all other relevant documentation, information or data:
  _____
  _____

IV. CERTIFICATION

A. Person Responsible for the Biennial Certification:

The following certification shall be signed according to N.J.A.C. 7:26E-1.5, N.J.A.C. 7:26C-1.2 and the covenant not to sue as follows:

1. For a Corporation by a person authorized by a resolution of the board of directors to sign the document. A copy of the resolution, certified as a true copy by the secretary of the corporation, shall be submitted along with the certification; or
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, federal or other public agency by either a principal executive officer or ranking elected Official.

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge I believe that the submitted information is true, accurate, and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement, which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."
>
> I also understand that in order to maintain the benefits of the Covenant Not to Sue, the engineering and institutional controls (as applicable) must be evaluated and maintained to remain protective of public health and safety and of the environment.

Based upon all of the information that I have provided above, I hereby certify that the remedial action(s) for which this Deed Notice and Engineering Control remain protective of public health and safety and of the environment.

Name (print or Type): ***Ms. I. M. Responsible*** Title: ***Property Owner***

Signature: *Ms. I. M. Responsible*

Company Name: **Haveto Maintainit, Inc**. Date: **5/22//00**

New Jersey Department of Environmental Protection
DEED NOTICE & ENGINEERING CONTROL BIENNIAL CERTIFICATION FORM

Revision Date: June 12, 2000 DN-001

I. GENERAL INFORMATION

A. *Site Location*:

Site Name as it appears on the Deed Notice: _____

Site Street Address: _____

Municipality: _____ County: _____ Telephone Number: (_ _ _) _ _ _-_ _ _ _

Block(s) : _____ Lot(s): _____

B. Person submitting Biennial Certification:

Name of Person: _____

Title: _____ Affiliation (i.e., name of company, etc.): _____

Street Address: _____

City: _____ State: _____ Telephone Number: (_ _ _) _ _ _-_ _ _ _

C. Case And Remedial Action Information (as applicable):

Known Contaminated Site List Number (mandatory): _ _ _ _ _ _ _ _ _ _ _ _ (12 characters)

ISRA I.D. Number (if applicable): E_____

Case Number (Incident Report #, if applicable): _ _ -_ _-_ _-_ _ _ _-_ _ (10 or 12 digits)

UST Registration Number (if applicable): _ _ _ _ _ _ _ (7 digits)

Date Deed Notice was filed in the office of the county recording officer:_____

Has the Department established a Classification Exception Area as part of the remediation of the site?
Yes _____ No _____

If yes, provide the date that the Classification Exception Area Biennial Certification Form is due to be submitted?
_____

II. DEED NOTICE

A. Deed Notice:

- On what date was the Deed Notice and all referenced Exhibits located in the office of the county recording officer (must be within six months prior to the date biennial certification is submitted): _____

- Information on individual who checked for filing of Deed Notice as indicated above:

  Name of Person: _____

  Title: _____ Affiliation (i.e., business, etc.): _____

  Street Address: _____

  City: _____ State: _____ Zip Code: _ _ _ _ _ - _ _ _ _ Telephone Number: (_ _ _) _ _ _-_ _ _ _

  Have any amendments and or additional filings been recorded that may modify, nullify or supersede the Deed Notice and Exhibits?
  Yes _____ No _____

  If you answered "Yes", explain how you corrected the problem**.**

B. Land Use:

- Land use at the time the deed notice was filed (Circle all that apply): Non-Residential Residential Agricultural Other _____

- Current land use (Circle all that apply): Non-Residential Residential Agricultural Other _____

  If the current land use is different than the land use at the time the Deed Notice was filed, explain how the remedial action, which included the Deed Notice, remains protective of public health and safety. Include the case manager's name that approved this change, if applicable.
  _____
  _____
  _____

C. Disturbance of Affected Area:

- Has <u>any</u> disturbance of the engineering control taken place within the restricted area(s) enumerated in the deed notice, since the last biennial certification or No Further Action letter, whichever is more recent?
  Yes _____ No _____

  If yes, explain. (Attachments may be submitted if necessary)
  _____
  _____
  _____

- Date(s) of Disturbance: _____
- Duration of Disturbance: years _____ months _____ days _____

- Individual responsible for conducting the disturbance:

  Contact Person: _____

  Title:_____

  Street Address: _____

  City:_____ State: _____ Zip Code: _ _ _ _ _ - _ _ _ _ Telephone Number: (_ _ _) _ _ _ - _ _ _ _

C. Disturbance of Restricted Area(continued):

- Provide date(s) / notification(s) that were made to the individual responsible for conducting disturbances.
  _____
- Was all soil excavated and returned to the restricted area?
  Yes _____ No _____ (If no explain) _____
  _____
  _____
- Quantity of soil generated for disposal (if applicable): _____tons _____cu. yds.
  Attach Transportation/disposal documentation
- State precautions taken during above activities to prevent contaminant exposure:_____
  _____
  _____
- If applicable, was the engineering control replaced following the disturbance?
  Yes _____ No _____ N/A _____

III. ENGINEERING CONTROL(s)

A. Engineering Control(s) (as applicable):

- Is there one or more engineering controls referenced in the Deed Notice?
  Yes _____ No _____
- If you answered "Yes" to the previous question please complete below (for each engineering control copy this sheet and attach separate sheets as necessary)

  List and describe each engineering control. (i.e., soil/vegatative cap, other cap, fencing, slurry walls, etc.):
  _____
  _____
  _____

  Describe the periodic monitoring and maintenance that is necessary to ensure that each engineering control continues to operate as designed in order to be protective of the public health and safety and of the environment:
  _____
  _____
  _____

B. Engineering/Institutional Control(s) (as applicable):

Attach or describe here, the records of the self-inspections, dates of the inspections, name of the inspector, inspection results, maintenance records, and current condition of the engineering control:
_____
_____
_____

- Are all institutional and engineering controls (as applicable) operating as designed and intended to ensure protection of public health and safety and of the environment?
  Yes _____ No _____
- If you answered "Yes" to the previous questions describe here and attach all other relevant documentation, information or data:
  _____
  _____

IV. CERTIFICATION

A. Person Responsible for the Biennial Certification:

The following certification shall be signed according to N.J.A.C. 7:26E-1.5, N.J.A.C. 7:26C-1.2 and the covenant not to sue as follows:

1. For a Corporation by a person authorized by a resolution of the board of directors to sign the document. A copy of the resolution, certified as a true copy by the secretary of the corporation, shall be submitted along with the certification; or
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, federal or other public agency by either a principal executive officer or ranking elected Official.

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge I believe that the submitted information is true, accurate, and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement, which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."
>
> I also understand that in order to maintain the benefits of the Covenant Not to Sue, the engineering and institutional controls (as applicable) must be evaluated and maintained to remain protective of public health and safety and of the environment.

Based upon all of the information that I have provided above, I hereby certify that the remedial action(s) for which this Deed Notice and Engineering Control remain protective of public health and safety and of the environment.

Name (print or Type): _____ Title: _____

Signature: _____

Company Name: _____ Date: _____

Submit To:

If a No Further Action/Covenant Not to Sue has been issued, this information shall be submitted every two years to:

Department of Environmental Protection
Division of Responsible Party Site Remediation
Bureau of Case Management – Attention: Deed Notice Inspection Manager
P.O. Box 028
401 E. State Street
Trenton, NJ 08625

Or

If a No Further Action/Covenant Not to Sue has been issued for an area of concern(s) prior to the conclusion of the case then submit this information to your assigned case manager.

Electronic Data Submission Required to Receive NFAs

By: John Defina and Izak Maitin
Bureau of Planning & Systems

On February 18, 1997 the Technical Rules for Site Remediation NJAC 7:26E were readopted with amendments. Notable in this readoption was the requirement that all future data submitted to the DEP would have to be in a Departmentally specified electronic format. Prior to that readoption there was a considerable period of time (one year from proposal) during which the regulated community was informed of the upcoming electronic requirement. Nevertheless the DEP recognized that full compliance with the rule is an evolutionary process that could not practically be implemented immediately. Accordingly the date for full compliance with electronic data submission was postponed 6 months from the date of the readoption, July 18, 1997. Guidance was published, support software distributed, and workshops were conducted during this period to assist the affected community with the requirements. The rule was amended again in August of 1999 without significant change to the electronic data submittal requirements.

The implementation of the electronic data requirements specified by the Technical Rule has been remarkably successful and kudos go to the regulated community at large and in particular to the many environmental consulting firms responsible for implementation of the technical details that support electronic data submission. Currently, over 85% of the data submissions are passing the Department's electronic review process. The partnership that has developed between the department and regulated community is quickly becoming a model for other states and federal programs. Presently the Site Remediation Program is engaged in training its staff in the use of the data management repository and SRP power users have received training on the system. Additional training is planned for these personnel as well as the rest of the programs professional staff.

In an effort to insure full compliance with electronic data submittal requirements effective July 15th 2000 the DEP will no longer issue NFA letters for cases **(excepting those cases subject to the homeowner exclusion)** that have not submitted data in the format specified under NJAC 7:26E and its associated guidance. Any submission dated July 15, 2000 or later must submit data in compliance with NJAC 7:26E. Note: that "acceptable" submissions mean meeting the electronic data requirements. Clarification for what constitutes acceptable is addressed below, and relates to the spatial accuracy of samples as specified in the referenced guidance. Below is a brief outline of the issues that have lead to the determination by the DEP to stress and require compliance with the Technical Rules electronic data requirements.

Caution: Technical and Statistical Details to Follow

Since February 18, 1997 over ten thousand electronic data submissions have been reviewed by the DEP and thousands of these files have been loaded in to the SRP data repository. Examination of the data using the DEP's GIS technology has begun, and while a number of case specific discrepancies have been identified, a large number of data sets have spatial and data accuracy that is accept-able. Elements of these data sets are being evaluated for application to Departmental projects, such as:

- ❑ Direct measurement of environmental quality and its improvement or degradation in the form of "Quantitative Environmental Indicators."
- ❑ Environmental Monitoring for Public Access and Community Tracking (EMPACT).
- ❑ Statewide identification of areas in the state appropriate for ground water well installation.
- ❑ Identification of point sources of ground water pollution sites in source water protection areas and watershed management areas.
- ❑ Assessment of the effectiveness and registration of institutional controls, notably Classification Exception Areas.
- ❑ Additionally, these data are being made available to SRP case managers for analysis and use with site data review and case management.

"Acceptable Data" What does that Mean?

As noted above a number of case specific discrepancies have been identified with some of the data submissions. The use of GIS as a visualization tool has made the following observations possible. **Note that these comments do not focus on the analytical accuracy of the data but rather are concerned with the accuracy of the reported spatial coordinates of the samples and the identification of the reported results.** Key issues of concern are:

- ❑ The spatial coordinates were not supplied in state plain coordinates (feet) using the NAD 83 datum.

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Electronic Data Submission Required to Receive NFAs (continued)

- ❑ The spatial coordinates provided were outside the boundaries of the state.
- ❑ The spatial coordinates while apparently within the boundaries of the state are clearly inaccurate and were not at the site in question.
- ❑ The same coordinate provided for all sampling points (wells and soil samples).
- ❑ Inconsistent use of or misidentification of the contaminates with CAS #s.

These issues must be corrected before electronic data submissions can be deemed complete and before the issuance of the NFA letter. Further information and guidance regarding these issues can be obtained at the Site Remediation web page at: **http://www.state.nj.us/dep/srp/hazsite**

Tidal Inlets—A Major Hurdle To Effectively Protecting Sensitive Coastal Resources

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Abstract:

Along much of the coastline of the United States, the most abundant sensitive coastal resources, such as salt marsh and mangrove ecosystems, occur within estuaries located landward of tidal inlets. Therefore, a protection strategy that could prevent oil spilled on the open ocean from passing through the inlets during flood tides would effectively protect these resources. Because of wave conditions and strong currents (2-3 kts common), inlets present a most difficult protection scenario requiring excellent scientific understanding and operational skills.

As a result of the *Anitra* oil spill in 1996, the New Jersey Department of Environmental Protection (NJDEP) realized that the inlet protection strategies that had been proposed were not feasible. Based on previous experience for over two hundred tidal inlets in California and Florida, the NJDEP sponsored a project to devise protection strategies for the 13 inlets on the coast of New Jersey. The field team, which had backgrounds in geomorphology, environmental concerns, and response operations, devised the final strategies based on the following hierarchy of controls: (1) physical processes in the inlet; (2) protection priorities; and (3) probable effectiveness of response. The final strategies included boom positioning, probable oil movement, and other key elements. Special emphasis was placed on collection points, which were visited to determine access, habitat type, and boom deflection angles (and type). Inlets were classified according to degree of difficulty and expense of the response, and the most difficult ones were flagged for special concern. Strategies were devised and signed off on in the field, with significant input from local spill responders. A successful field test, which applied boom deflection and containment, was carried out in one of the typical inlets. Only through the combination of good scientific data, experience with years of on-scene operational know-how, field assessments, and refinement through field testing can effective strategies be developed to overcome one of the most difficult hurdles in successful oil spill protection. These strategies are designed as an educated starting point of operations to be modified according to the specific needs at the time of the incident.

Introduction

In the classic sense, tidal inlets are channels that divide barrier islands into segments. They are subject to reversing tidal currents, and are conduits for the volume of water that flows in and out of the bay/estuarine system landward of the inlet during a tidal cycle called the tidal prism. It is through these conduits that oil spilled on open ocean waters could reach the sensitive resources, such as salt marshes, that occur along the bay/estuarine shorelines. Coastal tidal inlets are therefore focal points for designing strategies to protect these vital resources from spilled oil.

Based on Dr. Miles Hayes's experience in developing protection strategies for over 200 inlets in California

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Tidal Inlets—A Major Hurdle To Effectively Protecting Sensitive Coastal Resources (continued)

and Florida, the NJDEP commissioned a project to develop potential protection strategies for each tidal inlet occurring along the Atlantic coast of the state, including a Geographic Information System (GIS) component. A total of 13 inlets, located on Figure 1, were surveyed during this project. The field study of the New Jersey inlets was carried out in August 1997.

The protection strategies that were proposed emphasized flood-tidal conditions, because the basic assumption was that the strategy be designed to deal with spilled oil coming to the inlet from the open ocean. These proposed potential strategies were based on the information at hand on waves and tidal currents. Where such data were missing, inferences based on the geomorphology were used.

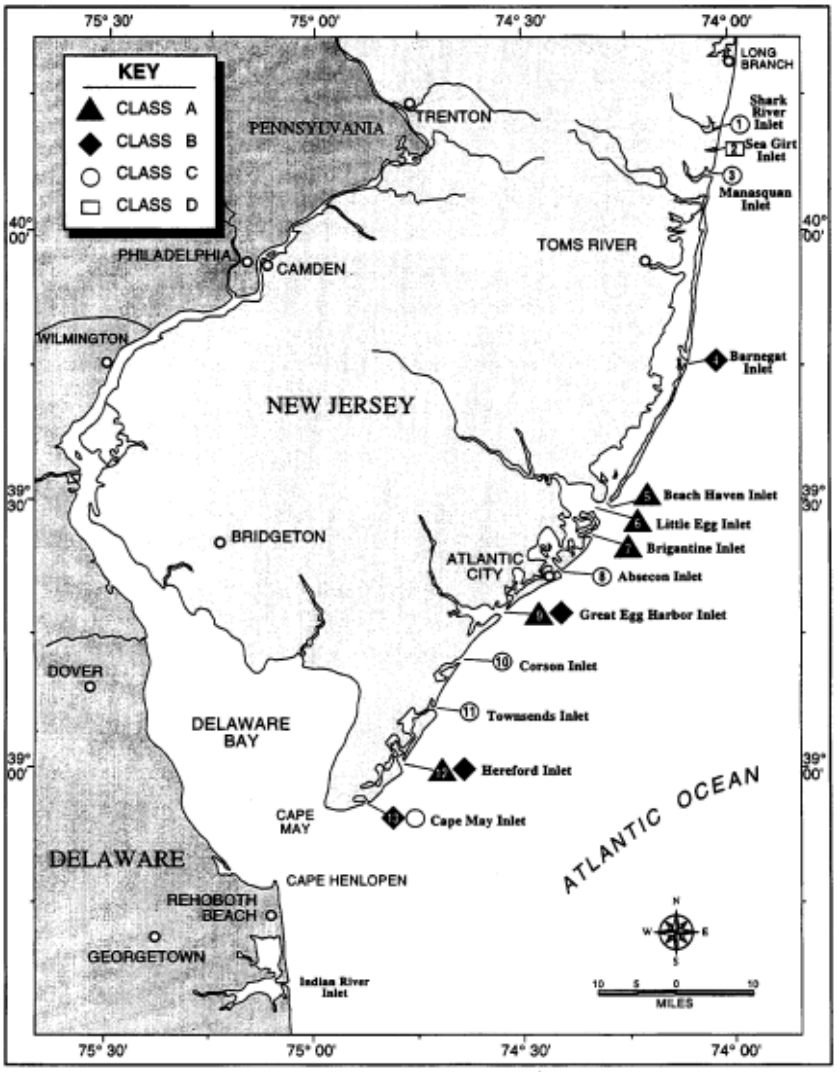

Figure 1. Inlets occurring along the Atlantic coast of New Jersey, ranked according to degree of difficulty for protecting the resources landward of the inlet .

Tidal Inlets—General

Tidal inlets on the sandy coastal plains of the eastern USA are usually formed by either of two mechanisms: (1) storm-generated scour channels (resulting inlets are usually shallow and prone to rapid migration); and (2) closure of estuarine entrances by growth of sand spits (resulting inlets usually deep and fixed in place).

As shown in Figure 2, a typical tidal inlet in a barrier island setting consists of a deep channel between the adjacent sand spits, called the inlet throat, and lobate-shaped sand bodies on either side of the inlet, called tidal deltas. The sand deposit on the landward side of the inlet, the flood-tidal delta, is typically composed of sheet-like lobes of sand with seaward-sloping ramps on their seaward sides covered by landward migrating waves of sand. The flood-tidal delta of Barnegat Inlet, New Jersey is illustrated by the oblique aerial photograph in Figure 3B. The sand deposit on the seaward side of the inlet, the ebb-tidal delta, is built seaward by ebb-tidal currents, but waves mold the outer margins into an arcuate shape and build landward migrating intertidal bars (swash bars) on the delta surface. The tidal flow on the ebb-tidal delta is horizontally segregated, with the main ebb channel, which usually projects perpendicular to shore off the inlet throat, being dominated by ebb-tidal currents. Shallower, flood-dominant channels (marginal flood channels) flank both sides of the ebb-tidal delta. The marginal flood channels are important in oil-spill response because the first waters to enter the inlet during the rising tide flow down these channels, even as residual ebb-tidal currents are flowing out the main ebb channel. This allows for a period of time (one hour or so) when any oil heading landward would be moving only down the marginal flood channels, during which time it could possibly be diverted to the adjacent sand beach, rather than allowing it to enter the inlet and impact the highly sensitive bay/estuary landward of it. The ebb-tidal delta of Corson Inlet is illustrated by the photograph in Figure 3A.

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Tidal Inlets—A Major Hurdle To Effectively Protecting Sensitive Coastal Resources (continued)

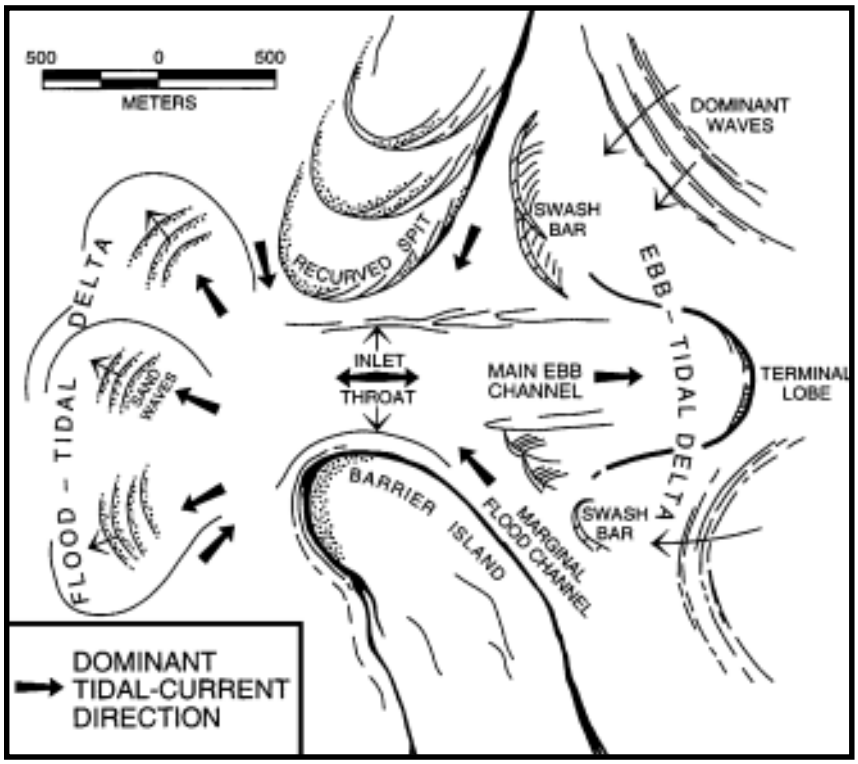

Figure 2. General model showing the morphological components of a typical tidal inlet.

Tidal Inlets—Atlantic Coast of New Jersey

Of the 13 tidal inlets on the Atlantic coast of New Jersey, five are confined by a set of two jetties. These inlets are Shark River, Manasquan, Barnegat, Absecon, and Cape May. Three of the inlets, Great Egg Harbor, Townsends, and Hereford, have groins or other man-made shore protection structures (seawalls, riprap, etc.) along at least one shoreline of the inlet. Four of the inlets, Beach Haven, Little Egg, Brigantine, and Corson, are in a completely natural state, except for periodic dredging activities in some instances. These inlets that are still in their natural state can be expected to change rapidly, especially during storms. Sea Girt Inlet has been closed recently by natural processes, though it could open again during a major storm.

Meaningful tidal current information on the tidal inlets of New Jersey is relatively scarce. We found current data for only five of the inlets. Maximum tidal current velocities of between 2.5 and 3.7 knots are predicted for some of the inlets by the NOAA computer tide program Shio. However, the strongest sustained flow measured by the U.S. Army Corps of Engineers was 2.9 knots at Barnegat Inlet. Flood current velocities of 2.0-2.5 knots probably occur in most of the inlets. Higher velocities are to be expected during conditions of wind-assisted flows.

Inlet Protection Strategies Used

The field team that devised the protection strategies was diverse, with backgrounds in geomorphology, environmental concerns, and operational experience. In

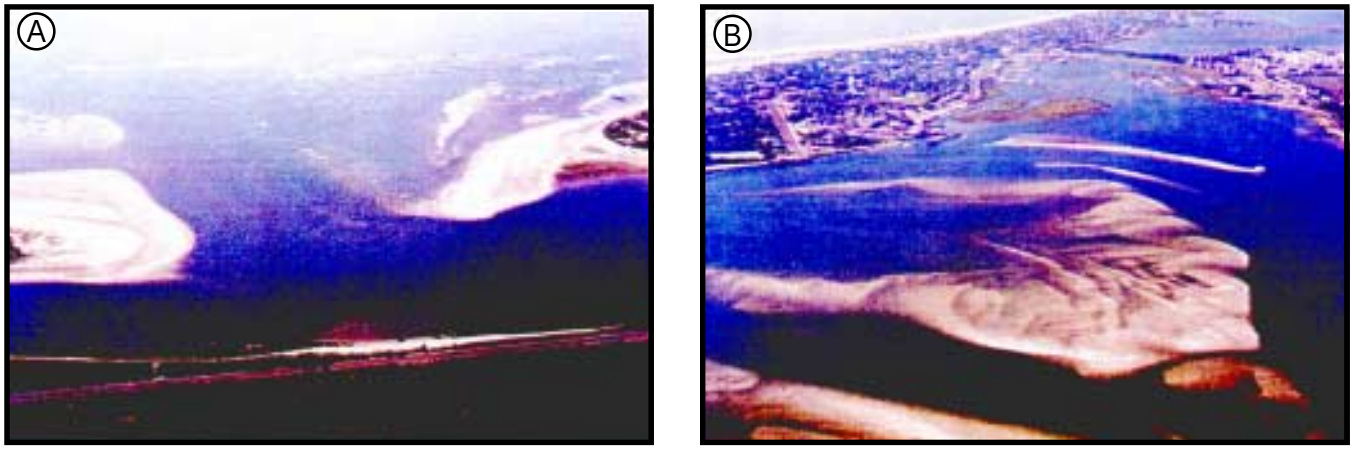

Figure 3. New Jersey tidal deltas. Compare with diagram in Figure 2. Photographs taken at low tide on 26 August 1997.

A. Ebb-tidal delta at Corson Inlet, looking southeast.

B. Flood-tidal delta at Barnegat Inlet, looking south.

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Tidal Inlets—A Major Hurdle To Effectively Protecting Sensitive Coastal Resources (continued)

making a decision on a protection strategy, the following hierarchy of controls dictated the final strategy:

Physical processes of the inlet ➡ Protection priorities ➡ Effectiveness of response

If the waves were assumed to be too large or tidal currents too strong for booms to function in certain parts of the inlet, the strategy called for fall back to more protected sites. Most of the strategies include primary, secondary, and tertiary levels. Information from a number of sources dictated which parts of the estuarine system landward of the inlet required priority protection. Typically, most of the inlets contained sensitive salt marshes and tidal flats. The potential effectiveness of response was also given careful consideration. The probable effectiveness of a response would be controlled by such factors as access, particularly to collection points, types of equipment required, and logistics support required.

An example of how one of the protection strategies is presented graphically is given in Figure 4. In that example, Corson Inlet, it was assumed that it would be necessary to fall back inside the inlet for the first line of defense, except for deflection boom set up (under moderate wave conditions) on the outer beaches to deflect oil from the marginal flood channels to the beach, particularly during the early flood stage of the tidal cycle. Three sites were chosen as the primary collection points (labeled 1, 2, and 6 on Figure 4) for oil coming through the inlet throat. Site 1 is a sand beach area located directly landward of the inlet throat, and

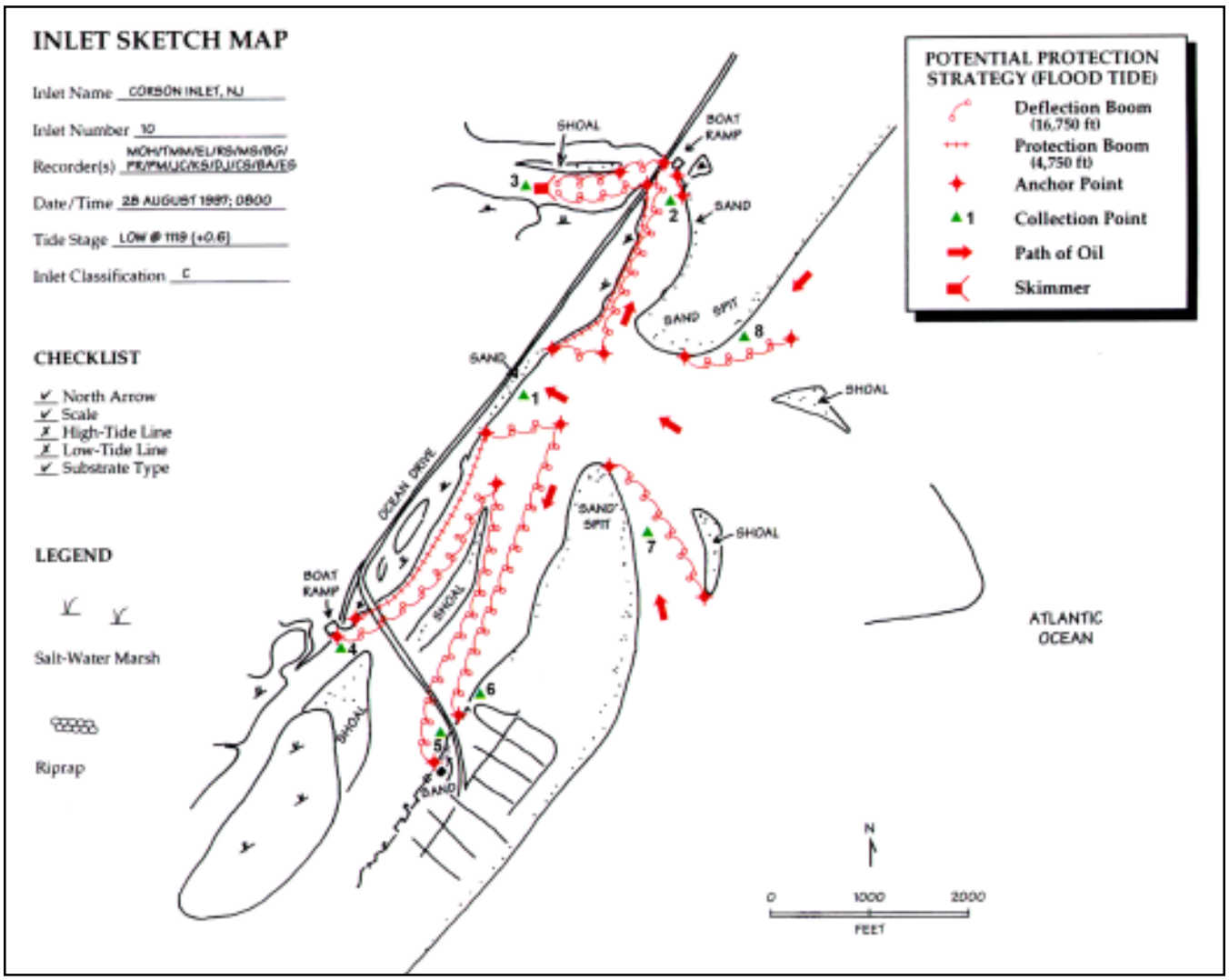

Figure 4. Flood-tide protection strategy for Corson Inlet, New Jersey.

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Tidal Inlets—A Major Hurdle To Effectively Protecting Sensitive Coastal Resources (continued)

sites 2 and 6 are along the shoreline on the landward side of the two sand spits at the inlet entrance (Figure 4). The primary collection points have contingency backup deflection boom and collection points, should entrainment occur at the first line of defense. Protection boom is used to protect the marsh shorelines just seaward of Ocean Drive. The arrows indicate the probable path of surface oil during the flood tide. Some of the critical recommended anchor points for the boom are also shown.

A successful field test was carried out for one of the New Jersey inlets in the fall of 1997, which confirmed the general principles used to develop these strategies. With the successful test, the NJDEP Division of Science, Research and Technology along with the Bureau of Emergency Response proposed a full-scale drill on the Barnegat Inlet, a Class A inlet, in October 1998. The test was carried out and was unsuccessful due to the amounts of boom and the extreme current in the "throat" of the Inlet. The primary strategy for the Barnegat Inlet will be reevaluated and it is expected that the primary protection strategy will be just inside the inlet. Because of the department's dedication to the protection of the estuaries, the Shark River Inlet is scheduled to be tested on October 14, 1999.

Acknowledgments

The NJDEP, with Stan Delikat as contract monitor, is acknowledged for supporting this project. The protection strategies presented in this document were developed at collectively by a field team consisting of the authors, Michael F. Solecki of the U.S. Environmental Protection Agency; Cari Savarese and Philip G. Hamrick of the U.S. Coast Guard; Bill Andrews, Dave Jenkins, and Jeff Nourmant of the New Jersey Department of Fish, Game, and Wildlife; Karen Salomon of the U.S. Fish and Wildlife Service, and representatives of spill response contractors (Patrick McGovern and Joe Causton of Clean Venture/Cycle Chem; Robert C. Grimm and Captain Frank J. Simonson of National Response Corporation; John Lane, S&D; Frederick A. Viera of Marine Spill Response Corporation; Robert Springer of the Cape May County-New Jersey Public Works; and Francis McCall of Cape May County Emergency Management Communications Center). At Research Planning Inc., Dot Zaino and Joe Holmes are acknowledged for sharing the responsibility of producing the final product. Other local experts and relevant government representatives also participated in the development of the strategies for the inlets in their respective areas.

Biography

Rob Schrader has over 20 years of oil spill experience. Starting with the US Coast Guard for twelve years and presently a Response Specialist with the New Jersey Department of Environmental Protection, Bureau of Emergency Response. He has been On Scene Coordinator on numerous spills including the 1995 Jahray Spray and the 1996 Anitra oil Spill. He has authored articles for the International Oil Spill Conference and the NJDEP.

Dr. Miles O. Hayes is a coastal geomorphologist and clastics sedimentologist with over 35 years of experience in research on coastal processes and sedimentation. In 1997, he was awarded the Francis P. Shepard Marine Geology medal by the Society of Economic Paleontologists and Mineralogists. He has authored over 200 articles and reports on numerous topics, including oil pollution studies.

Edwin ("Ed") Levine presently serves as Scientific Support Coordinator (SSC), representing the National Oceanic and Atmospheric Administration (NOAA) Office of Response and Restoration (OR&R), in the coastal region from Connecticut through Delaware. In this capacity he serves as the science advisor to the Federal On-Scene Coordinators during oil spills and chemical releases.

Over the past twelve years he has responded to dozens of incidents at the request of Federal and State officials, including eight weeks in Alaska for work on the Exxon Valdez oil spill. These responses were for products ranging from crude through refined oil to chemicals and even floatable debris in the New York Bight. The more noteworthy incidents in this area were the Exxon Bayway pipeline failure and spill, T/V Presidente Rivera and T/V World Prodigy, and Julie N tanker spills, T/B North Cape fire and spill, and the C/V Santa Clara I arsenic trioxide release.

As part of the contingency planning effort, Mr. Levine has helped review and comment on the Area Contingency Plans for the Coast Guard Captain of the Ports of Long Island Sound, New York and Philadelphia. He is also an advising member to the Regional Response Teams for Federal Regions II, III, and I.

In his previous position as Coordinator of Monitoring for the City of New York Department of Environ-

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State Wins National Brownfields Award For U.S. Steel/Trenton Waterfront Redevelopment

New Jersey's brownfield program won the coveted Phoenix Award at the fifth annual Industrial Site Recycling Conference held recently in Pittsburgh.

"This national award recognizes New Jersey's commitment to the state and local community partnerships necessary to support brownfield efforts and, coupled with Governor Whitman's open space initiative. This is sustainable redevelopment in action," said DEP Commissioner Shinn.

The Phoenix Award for Site Selection /Community Impact was awarded to DEP for its US Steel/Roebling case study which described the remediation and redevelopment of the Trenton waterfront. The study also highlighted the cooperative efforts of DEP, the City of Trenton, Mercer County Improvement Authority and the developer. Formerly the site of a steel manufacturing facility, the 31-acre site was cleaned up and redeveloped to contain the Mercer County Waterfront Stadium, the River View Office Park and the Katmandu restaurant.

"Receiving the Phoenix Award demonstrates what can be accomplished when all levels of government work together to improve our environment," said Trenton Mayor Douglas H. Palmer. "Every resident of Trenton and every citizen of New Jersey can be proud of what was accomplished."

Richard J. Gimello, former DEP Assistant Commissioner for Site Remediation, presented the case study during the conference. "This program sends a clear message to those who still ask if redevelopment of contaminated and underutilized industrial sites is a viable and beneficial undertaking. It has been proven successful not only for those firms which can profit from the services provided but for the communities that host the projects as well."

The Phoenix Awards Program is a national award of distinction for brownfield redevelopment that seeks to showcase solutions and innovations of successful brownfield projects. Fifteen finalists were selected from the many projects that were submitted to the Phoenix Award Panel of Judges.

The Phoenix Award recognizes the best project in each of the four major criteria: magnitude of the project; innovative brownfield techniques; environmental regulatory issues that were overcome; and, site selection/ community impact.

Do I Need A Permit?

By: Greg Giles
Bureau of Ground Water Pollution Abatement

Permits are needed for the installation of all wells and some borings. These permits are obtained from the Bureau of Water Allocation (609-984-6831). This article is written to help clarify any confusion about when a permit is needed from the Bureau of Water Allocation. To determine if a permit is needed for any planned work, the following points need to be considered:

- ❑ If a soil boring is advanced 25 feet or greater, a soil boring permit is required. The depth to water, or whether or not the boring is advanced below the water table is not a factor.
- ❑ A single soil boring permit is $50. If multiple borings 25 feet or greater are planned, a $100 site-wide permit may be obtained. A site-wide permit will allow for the installation of an undetermined number of borings under a single permit. A site wide permit applies to a single lot and block, or a right of way easement within a single municipality, or a contiguous property of common ownership consisting of multiple lots and / or blocks within a single municipality.
- ❑ The installation of temporary screen and/or casing to collect ground water samples or obtain water table depths, if left in the ground less than 48 hours, is considered a boring and requires a soil boring permit only if installed to a depth of 25 feet or greater.
- ❑ The installation of any screen and/or casing, if left in the ground longer than 48 hours, will be considered a well and will require a well permit irrespective of depth or whether the water table is crossed.
- ❑ A valid New Jersey well permit must be obtained from the department prior to drilling, constructing, installing, physically altering or redesignating the use of any well.

Examples

- ❑ If the water table is at 8 feet, and a boring is advanced to a depth of 21 feet, a permit is not required.
- ❑ All temporary wells and drive points, if left in the ground less than 48 hours and advanced less than 25 feet do not require a permit.

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Do I Need A Permit? (continued)

- ❑ All temporary wells and drive points, if left in the ground less than 48 hours, but advanced 25 feet or greater, will require a soil boring permit.
- ❑ All temporary wells and drive points, if left in the ground greater than 48 hours are considered wells and will require a well permit irrespective of depth.
- ❑ Screen and/or casing installed for: 1) the injection of hydrogen peroxide, 2) the injection of Oxygen Releasing Compound (ORC®), or 3) the injection or extraction of air, if left in the ground greater than 48 hours will require a well permit irrespective of depth.

General Information:

The *Site Remediation News* is published by the Program Support Element. If you want to receive the *Site Remediation News*, it is available on the web page at *http://www.state.nj.us/dep/srp*. If you want a paper copy, please send a request containing your name and address to:

George H. Klein
Program Support Element
PO Box 413
Trenton, New Jersey 08625-0413

Awards

ITRC State Engagement Award was presented to the following Site Remediation Program staff by NJDEP Commissioner Shinn: Matt Turner, Frank Camera, John Kosher, Rob Lux and Brian Sogorka.

Tidal Inlets—A Major Hurdle To Effectively Protecting Sensitive Coastal Resources
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mental Protection's, Bureau of Waste water Treatment, he supervised, managed and administered EPA compliance monitoring of the NY Bight ocean sludge disposal site (12-mile site) and surrounding area, the annual NYC Harbor Water Quality Survey, and programmatic and non-programmatic sampling for the 14 City waste water treatment plants.

In 1981 Mr. Levine received his Master of Science in Marine Sciences from the University of Puerto Rico, Mayagüez, Puerto Rico. His thesis title was "Nutrient Cycling by the Red Mangrove (Rhizophora mangle L.) in Joyuda Lagoon, on the West Coast of Puerto Rico." In 1976 he received his Bachelor of Arts degree in Coastal Environmental Studies from Boston University, Boston, Massachusetts.

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Christine Todd Whitman, Governor
Robert C. Shinn, Jr., Commissioner