NEW JERSEY SOCIETY OF MUNICIPAL ENGINEERS

NEW REQUIREMENTS FOR EXCAVATIONS IN STREETS, ROADS AND RIGHT OF WAYS – (NJDEP Rules Changed May 7, 2012)

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TODAY'S AGENDA

MAY 2012 SITE REMEDIATION PROGRAM RULE AND REGULATION CHANGES

- USE OF LSRPs
- AFFIRMATIVE OBLIGATION TO REMEDIATE
- REGULATORY AND MANDATORY (STATUTORY) DEADLINES
- IMMEDIATE ENVIRONMENTAL CONCERN AND VAPOR CONCERN SITES

- ADMINISTRATIVE RULES REQUIREMENTS FOR THE REMEDIATION OF CONTAMINATED SITES (ARRCS)
- TECHNICAL REQUIREMENTS FOR SITE REMEDIATION REVISIONS
- SPECIFICATIONS AND FLOW CHART
- IN-DEPTH TOPICS
  - LSRP PROGRAM
  - CLEAN FILL / ALTERNATE FILL
  - HISTORIC FILL
- CONCLUSIONS
- FAQ’s
- REFERENCES
- NOTE – DEP POWERPOINT PRESENTATIONS USED WITH PERMISSION

KEY ISSUES

- DON'T NECESSARILY HAVE TO REMEDIATE AOCs AT A SITE IF ROADWAY/UTILITY PASSING OVER OR THROUGH
- CAN'T EXACERBATE GROUNDWATER OR OTHER CONTAMINATION/STORMWATER MANAGEMENT/INFILTRATION – A KEY ISSUE
- NO WAIVERS FOR PROPER MANAGEMENT OF MATERIALS MOVED ACROSS PROPERTY LINES
- NO WAIVERS FOR TSCA WASTES (PCBs), ASBESTOS OR HAZARDOUS WASTES
- LANDFILL SITES UNDER SEPARATE STATUTE/NO EXEMPTIONS

KEY ISSUES CONT.

- REMOVE FREE PRODUCT WHEN PRACTICAL
- DON'T MOVE CONTAMINATED SOIL TO UNCONTAMINATED AREAS; FOLLOW SOIL REUSE PROTOCOL
- PROPERTY OWNER/RESPONSIBLE PARTY LIAISON EXPECTED
- MATERIALS MANAGEMENT PLAN IS KEY
- FOR CONTAMINATED MATERIALS EXCAVATED > 200 CY

MOST COMMON AOCs:

- HISTORIC FILL (MUST MEET DEFINITION)
- NON-NATIVE FILL
- UST RELEASES
- MUNICIPAL/SOLID WASTE
- DISCHARGES INTO HISTORIC FILL/INDUSTRIAL WASTE MIXED WITH HISTORIC FILL

DUE DILIGENCE

- PRELIMINARY ASSESSMENTS V. PHASE I ESAs
- LINEAR DATABASE REVIEWS
- WHAT IS A PAOC VS. AN AOC VS. A CONTAMINATED AOC?
- SITE INVESTIGATIONS (AN AOC?)
- REMEDIAL INVESTIGATIONS (DELINEATE)

CLEANUP

- REMEDIAL ACTION WORKPLAN
- REMEDIAL ACTION REPORT
- RESPONSE ACTION OUTCOME BY LSRP (FINISHED!)

LINEAR CONSTRUCTION

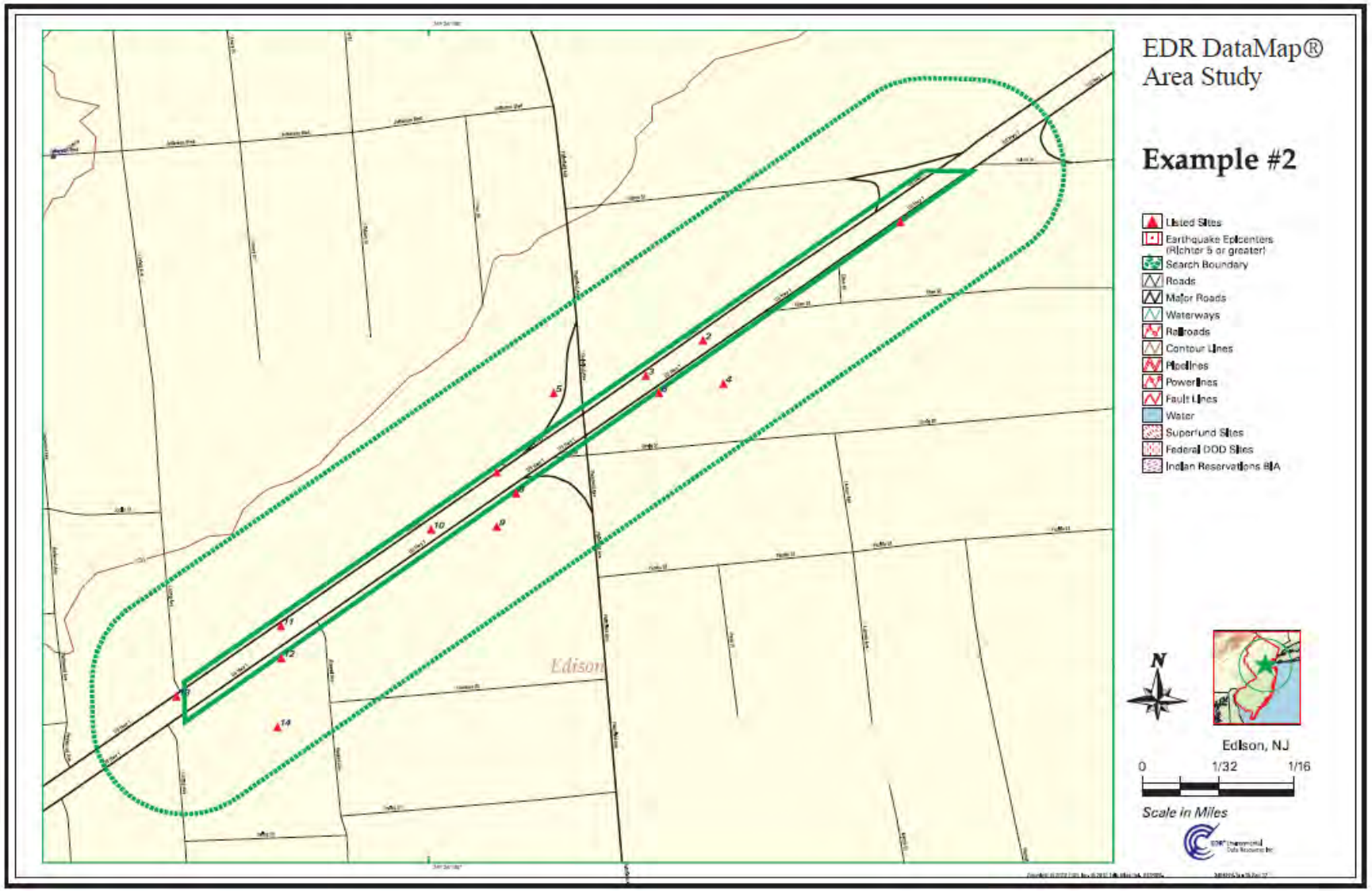
- NOTICE
- FINAL REPORT

TYPICAL DUE DILIGENCE QUESTIONS

- In what year was the property first developed?
- Has there been any industrial ownership or use of the property and/or neighboring properties?
- Were there any reported or otherwise known spills or releases on the property? If so, where were they located?
- Were any non-soil materials ever buried at the property? If so, where were they located?
- Were there any petroleum or chemical storage tanks ever present on the property and/or neighboring properties?
- Were motor vehicles ever serviced or maintained on the property?
- Was the property ever in agricultural use? If so, were there ever orchards or crops where herbicides or pesticides were applied?
- Were any land clearing materials ever buried on the property?
- Was any sewage sludge ever spread on the property?
- Was there paving before 1935?
- Was asbestos mixed into concrete?

- If any fill was ever brought onto the property, is the source of the fill known?
- Were any structures ever demolished and the remains left on the property and covered?
- Where are the locations of any spills, releases or non-native soils other non-native materials on the property?
- Were there any other issues of an environmental nature ever reported at the property?

EDR LINEAR DATABASE REVIEW



MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.)	Site	Database(s)	EDR ID Number / EPA ID Number
1	**FORMER RARITAN OIL** **410 US RT 1** **EDISON TWP, NJ 08817**	**UST**	**U000369633** **N/A**

UST:

Facility ID:	004679
Owner Name:	NICHOLAS KAMBITSIS
Organization:	NDK REALTY
Contact Type(UST Reg):	Facility Operator
Contact Address (UST Reg):	1411 STELTON RD
Contact Address 2 (UST Reg):	Not reported
Conact City,St,Zip (UST Reg):	Piscataway, NJ 088545965
Owner Name:	NICHOLAS KAMBITSIS
Organization:	NDK REALTY
Contact Type(UST Reg):	Tank Owner
Contact Address (UST Reg):	1411 STELTON RD
Contact Address 2 (UST Reg):	Not reported
Conact City,St,Zip (UST Reg):	Piscataway, NJ 088545965
Tank Id:	TANK-1
Tank Number:	A1
Tank Contents:	Kerosene (No. 1)
Tank Size:	10000
Install Date:	01/01/1952
Tank Compliance:	No
Tank Status:	**Abandoned in Place**
Overfill:	No
Tank Status Date:	09/01/1985
Compliance Monitoring?:	No
Overfill Protection:	No
Spill Containment:	No
Tank Wellhead Protection:	Not reported

TANK MONITOR DATA:

Monitor Tank / Pipe:	Pipe
Monitor Type:	None
Monitor Tank / Pipe:	Tank
Monitor Type:	None

TANK DETAIL:

Tankpipe Tank / Pipe:	Pipe
Tankpipe Construction Type:	Cathodically protected steel
Tankpipe Tank / Pipe:	Tank
Tankpipe Construction Type:	Cathodically protected steel
Tank Id:	TANK-2
Tank Number:	E1
Tank Contents:	Heating Oil (No. 2)
Tank Size:	20000
Install Date:	01/01/1986
Tank Compliance:	No
Tank Status:	**Removed**
Overfill:	No
Tank Status Date:	10/15/2007
Compliance Monitoring?:	No
Overfill Protection:	No
Spill Containment:	No
Tank Wellhead Protection:	Not reported

TANK MONITOR DATA:

Monitor Tank / Pipe:	Pipe

Count: 99 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
EDISON	S104709522	ROOSEVELT PARK GROVE #2 LOT	RT 1		SPILLS, NJ Release
EDISON	1004560936	BOND 2 DRY CLEANERS & LAUNDRY	775 RT 1	08817	FINDS
EDISON	S111260956		755 RT 1 S	08817	SHWS, NJ Release
EDISON	S107060598	GETTY SERVICE STATION #00498	1371 RT 1	08817	SHWS, SPILLS, INST CONTROL
EDISON	U004131644	SERVICE STATION 842 FORMER	RT 1 N & PLAINFIELD AVE	08817	UST
EDISON	U004179052	421 US 1 PETROLEUM LLC	421 RT 1 S	08817	UST
EDISON	1000456828	EDISON COLLISION INC	848 HWY 1	08817	RCRA-NonGen, FINDS
EDISON	1000168709	MARCEL CLEANERS	RTE 1 & POST RD CORNER OF	08817	RCRA-NonGen
EDISON	1007026138	GETTY SERVICE STATION #00498	1371 RT 1	08817	FINDS, BROWNFIELDS
EDISON	1000233781	LANGER TRANSPORT CORP	RT 1 & OLD POST RD	08817	RCRA-NonGen, FINDS
EDISON	1000290100	MENLO TERMINAL INC T-A EDISON GULF	RTE 1 N SIDE OF	08817	RCRA-NonGen, FINDS
EDISON	1000383694	GLASOFER MACK	RTE 1 & PLAINFIELD AVE	08817	RCRA-NonGen, FINDS
EDISON	1004751637	SUNOCO SERVICE STATION	737 RTE 1 S & OLD POST RD	08817	RCRA-NonGen
EDISON	1004751640	SUNOCO SERVICE STATION	386 RTE 1 N	08817	RCRA-NonGen, FINDS
EDISON	S107584766	ALPINE AROMATICS INTERNATIONAL INCORPORA	RT 1 S	08817	ISRA
EDISON	U004025513	FUEL ONE INC	701 RT 1 S	08817	UST
EDISON	U004083084	RACEWAY	1501 RT 1 S	08817	UST
EDISON	S107495382	BP SERVICE STATION 839	421 RT 1 S	08817	HIST HWS, LUST
EDISON	S108973615	AMOCO SERVICE STATION 842	RT 1 N & PLAINFIELD AVE	08817	BROWNFIELDS
EDISON	S108973619	BERGER INDUSTRIES INC	RT 1 S & PRINCE ST	08817	SHWS, BROWNFIELDS
EDISON	S105486210	SHELL SERVICE STATION	RT 1 S & OLD POST RD		HIST LUST, VCP
EDISON	S109837529	AMOCO SERVICE STATION #842	RT 1 N & PLAINFIELD AVE	08817	SHWS, INST CONTROL
EDISON	1000708480	MOBIL OIL CORP SS 15KHW	RT 22 & VINELAND RD		RCRA-NonGen, FINDS
EDISON	S106587135	ADVANCE AUTO PARTS STORE	396 RT 23	08817	VCP
EDISON	1000446096	EDISON LAUNDROMAT	2046 RTE 27 NIXON PLZ	08817	RCRA-NonGen
EDISON	S105466408	YANNUZZI RECYCLING #4	RT 27 & VINEYARD RD	08817	HIST LF
EDISON	S109779317	REVLON CONSUMER PRODUCTS CORP	RT 27 & TALMADGE RD	08817	MANIFEST
EDISON	S109779557	MOBIL CHEMICAL CO. - CPD	RT 27 & VINEYARD RD	08817	MANIFEST
EDISON	S111430681	COSTCO #323	2210 RT 27 N	08817	MANIFEST
EDISON	1000911576	NJDOT BRIDGE PAINTING BIN NUMBER 1230 162	ROUTE 287 OVER RT I95 (NJTPK)	08817	RCRA-NonGen, FINDS
EDISON	S104588484	EDISON WOODS (FORMER EASTLAND EXPRESS)	RT 7 N		HIST LUST
EDISON	S104338457	HESS GAS STN	789TH AMBOY & WOODBRIDGE AVES		SHWS, SPILLS
EDISON	S109310725	76 CHESTNUT ST	76 CHESTNUT ST	08817	SHWS
EDISON	S108973626	LEHIGH VALLEY RAIL LINE	EDISON RAIL YARD	08817	SHWS, BROWNFIELDS
EDISON	S109292861	51 ELLIOT PLACE	51 ELLIOT PL	08817	SHWS
EDISON	S110747568	MIDDLESEX CNTY REPLACEMENT OF EXECUTIVE AVENUE BRIDGE #1B133	48 EXECUTIVE AVE	08817	SHWS, INST CONTROL
EDISON	S109309925	31 EXETER AVENUE	31 EXETER AVE	08817	SHWS
EDISON	1014925657	RITE AID #7935	416 US HWY 1	08817	RCRA-CESQG
EDISON	S108950140	JERSEY TRUCK SALES FORMER	842 US HWY 1	08817	SHWS, VCP, BROWNFIELDS
EDISON	S112010159	BJ WHOLESALERS CLUB	1000 US HWY 1	08817	MANIFEST
EDISON	S108064995	EDISON MALL	US HWY 1 & OLD POST RD	08817	SHWS, VCP
EDISON	S111262472		66 LAURA AVE	08817	SHWS, NJ Release

GENERAL

LF – Solid Waste Facilities/Landfills

- SWF/LS type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

COAL ASH – Coal Ash Landfill Listing

- A listing of coal combustion survey ash handling site locations. Department of Environmental Protection.

HIST LF – Solid Waste Facility Directory

- Old or non-permitted solid waste facilities/landfills that are not included in the current solid waste facilities/landfills database. Department of Environmental Protection.

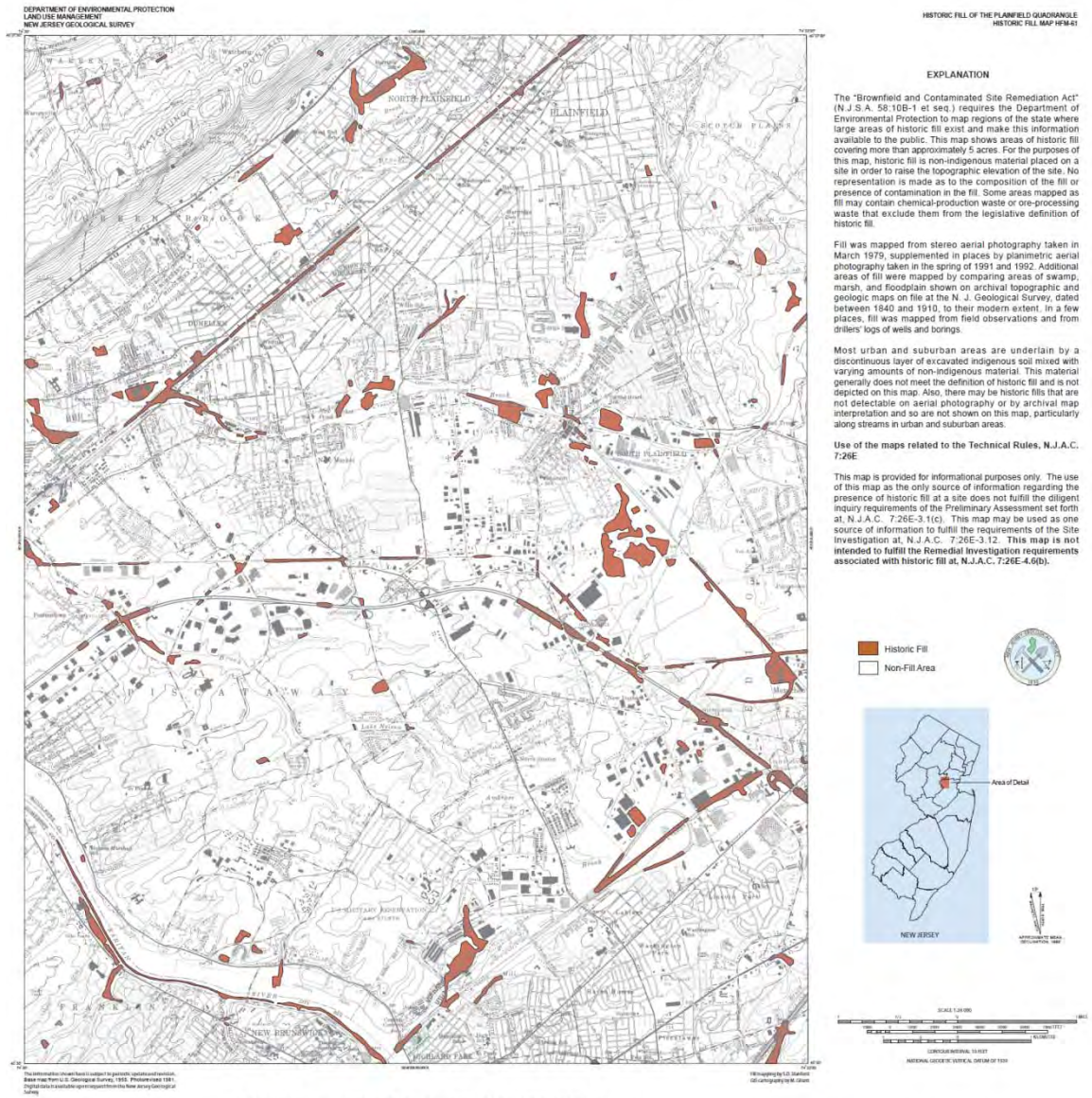
LF - Landfill Location Database

- Department of Environmental Protection.

NON OP LF – Non-Operating Landfills Database

- The landfills described in this document are non-operating and historic landfills identified by, or reported to, the Department. Working with local and regional environmental agencies, community representatives, and through review of historic materials the Site Remediation Program is developing this inventory to prevent injury to human and ecological resources. Department of Environmental Protection.

DATAMINER EXAMPLE



HISTORIC FILL OF THE PLAINFIELD QUADRANGLE

2008

USE OF LSRPs

- NOW REQUIRED TO ADDRESS ALL DISCHARGES WITH VERY LIMITED EXCEPTIONS
- DEP OVERSIGHT - RCRA, SUPERFUND, NON RESPONSIVE PARTIES
- RESPONSE ACTION OUTCOME – REPLACES NO FURTHER ACTION LETTERS
- TECHNICAL CONSULTATION
- VARIANCES POSSIBLE

AFFIRMATIVE OBLIGATION TO REMEDIATE

- NO LONGER WAITING FOR DEP TO RESPOND
- THIS IS STATUTORY IN ARRCs RULES
- NEW – REMEDIATION PERMITS
  - SOIL
  - GROUNDWATER

RULES/PROGRAMS THAT REMAIN:

- SOLID WASTE/LANDFILLS
- REGULATED UNDERGROUND STORAGE TANKS
- UNREGULATED HEATING OIL TANKS
- INDUSTRIAL SITE RECOVERY ACT
- RCRA PERMITTED UNITS

TECHNICAL REQUIREMENTS FOR SITE REMEDIATION REVISIONS

- LESS PRESCRIPTIVE
- LSRP DIRECTED
- SAMPLING/INVESTIGATIVE APPROACHES GROUPED AS TO APPROACH
- NO CHANGE IN NEED FOR FULL DELINEATION; EXCEPT – HISTORIC FILL – TO PROPERTY LINE ONLY

REGULATORY AND MANDATORY (STATUTORY) DEADLINES

Summary of Regulatory and Mandatory Timeframes for Remediation[1]

Table 1. Remediation Timeframes (excludes remedial investigation timeframes see Table 2)

Remediation Requirement	Regulatory Timeframe	Tech Rule Citation	Mandatory Timeframe	ARRCS Citation
LSRP Retention Requirements				
Hire LSRP	When a discharge is discovered or initiation of remediation			7:26C-2.3(a)1
Submit LSRP retention form	Within 45 days after discharge or initiation of remediation			7:26C-2.3(a)2
Public Notification and Outreach Requirements				
Notify the Department of discharge	Immediately after discharge is identified (15 min)			7:26C-1.7(a)
Submit written documentation of the discharge (Confirmed Discharge Notification Form or GIN)	Within 14 days after a discharge is discovered or initiation of remediation			7:26C-1.7(d)
Post sign or send letters for public notification and submit documentation to local government entities	14 days prior to initiation of field activities associated with the RA			7:26C-1.7(h)2
If letters are used, distribute updated notification letters and submit documentation to local government entities	Every 2 years until final remediation document is filed or issued			7:26C-1.7(h)2i
Prepare and distribute a fact sheet which includes site and contamination information	Within 14 days after off-site contamination is identified			7:26C-1.7(l)1
Publish fact sheet in newspaper, submit documentation	Within 30 days after off-site contamination is identified			7:26C-1.7(l)3

Remediation Requirement	**Regulatory Timeframe**	**Tech Rule Citation**	**Mandatory Timeframe**	**ARRCS Citation**
Update, redistribute and republish fact sheet – soil contamination	Within 90 days after complete delineation			7:26C-1.7(l)4
Conduct public notification pursuant to N.J.A.C. 7:26C-7.3 – ground water contamination	When DEP establishes a ground water CEA			7:26C-1.7(l)5
Light Non-aqueous Phase Liquid (LNAPL) Requirements				
Submit LNAPL Reporting Form when LNAPL > 0.01 feet in thickness is identified and initiate LNAPL recovery	Within 60 days after the date LNAPL is identified	7:26E-1.10(b)		
Initiate LNAPL Interim Remedial Measure (IRM) and submit LNAPL Reporting Form and LNAPL IRM report	Within 1 year after LNAPL is identified	7:26E-1.10(b)2	Within 2 years LNAPL is identified	7:26C-3.3(a)4
Immediate Environmental Concern (IEC) requirements				
Notify Department of IEC	Immediately after IEC condition is identified	7:26E-1.11(a)1		
Provide an interim response action to address potable water IEC and provide analytical results to property owner /occupant and health official	Within 5 days after identifying IEC condition	7:26E-1.11(a)2i		
Provide an interim response action to address vapor intrusion that exceeds rapid action levels and provide analytical results to property owner /occupant and health official	Within 14 days after identifying IEC condition	7:26E-1.11(a)2ii		

Remediation Requirement	**Regulatory Timeframe**	**Tech Rule Citation**	**Mandatory Timeframe**	**ARRCS Citation**
Provide an interim response action to address direct contact IEC and provide analytical results to property owner /occupant and health official	Within 5 days after identifying IEC condition	7:26E-1.11(a)2iii		
Submit IEC form, spreadsheet, map and data	Within 14 days after IEC identifying IEC condition	7:26E-1.11(a)3		
Implement an engineered response action (provide water treatment or alt supply)	Within 60 days after identifying potable water IEC	7:26E-1.11(a)6i1		
Continue to identify and sample all potable wells or buildings for VI	Within 60 days after identifying potable water or vapor intrusion IEC	7:26E-1.11(a)6i(2) 7:26E-1.11(a)6ii(2)		
Implement an engineered response action (install a vapor intrusion remedial action system)	Within 60 days after identifying vapor intrusion IEC	7:26E-1.11(a)6ii(1)		
Implement an engineered response action (implement a response action that prevents physical contact)	Within 60 days after identifying direct contact IEC	7:26E-1.11(a)6iii		
Submit IEC engineered response action report	Within 120 days after identifying IEC	7:26E-1.11(a)7		
Identify all contaminant source areas and initiate control of and submit an IEC source control report	Within 1 year after identifying IEC	7:26E-1.11(a)8	Within 2 years after identifying IEC	7:26C-3.3(a)3
Submit monitoring and maintenance reports	Annually until a remedial action permit is issues	7:26E-1.11(a)9		
Receptor Evaluation Requirements - general				
Submit a completed initial receptor evaluation	Submit initial receptor evaluation within 1 year after discharge is discovered or initiation of remediation	7:26E-1.12(c)	Submit initial receptor evaluation within 2 years after discharge is discovered or initiation of remediation	7:26C-3.3(a)2ii

Remediation Requirement	**Regulatory Timeframe**	**Tech Rule Citation**	**Mandatory Timeframe**	**ARRCS Citation**
Receptor evaluation – Ground Water Requirements				
Conduct a well search as part of the ground water receptor evaluation	Within 90 days after ground water contamination is detected	7:26E-1.14(a)1		
Notify the Department prior to sampling potable wells	7 days prior to sampling event	7:26E-1.14(a)2i		
Conduct sampling of any well that may be used for potable purposes Submit form and spreadsheet of property owners/tenants to be sampled	Within 120 days after ground water contamination is detected No later than 7 days prior to conducting sampling	7:26E-1.14(a)2		
If any potable wells are impacted, follow IEC requirements for potable water	For time frames see 7:26E-1.11(a)	7:26E-1.14(b)		
If no contaminants are detected above remediation standards, submit analytical results on a form and spreadsheet and notify well owners	Within 30 days after receipt of analytical results from the laboratory	7:26E-1.14(c)		
Update the well search to identify any new wells	Every 2 years after the first trigger for a well search	7:26E-1.14(a)3		

Remediation Requirement	Regulatory Timeframe	Tech Rule Citation	Mandatory Timeframe	ARRCS Citation
Receptor evaluation – Vapor Intrusion (VI) Requirements				
Identify structures and other information for vapor intrusion investigation	Within 60 days after determining the need to conduct a vapor intrusion investigation	7:26E-1.15(b)		
Conduct required VI sampling Submit form and spreadsheet of property owners/tenants to be sampled	Within 150 days determining the need to conduct a vapor intrusion investigation No later than 7 days prior to conducting sampling	7:26E-1.15(c)		
Notify the Department prior to sampling indoor air	7 days prior to sampling event	7:26E-1.15(c)		
If indoor air samples do not exceed any indoor air screening level, submit analytical results on a form and spreadsheet and notify property owner/tenant	Within 30 days after receipt of analytical results	7:26E-1.15(d)		
If indoor air samples are greater than any indoor air screening level, but less than or equal to rapid action levels (Vapor Concern) submit analytical results on a form and spreadsheet and notify property owner/tenant	Within 14 days after the receipt of analytical results	7:26E-1.15(e)1		
If a vapor concern condition exists submit a plan to the Department to address the exposure	Within 60 after the receipt of analytical results	7:26E-1.15(e)2		
If a vapor concern condition exists implement the plan to address the exposure	Within 120 after the receipt of analytical results	7:26E-1.15(e)3		
If a vapor concern condition exists submit a vapor intrusion response action report	Within 180 after the receipt of analytical results	7:26E-1.15(e)4		
If indoor air results are greater than the vapor intrusion rapid action level (RAL) follow IEC requirements for vapor intrusion	Immediately notify the Department For time frames see 7:26E-1.11(a)	7:26E-1.15(f)1		

Remediation Requirement	**Regulatory Timeframe**	**Tech Rule Citation**	**Mandatory Timeframe**	**ARRCS Citation**
If any indoor air results are greater than DHSS Notification Levels follow IEC requirements for vapor intrusion	Immediately notify the Department and DHSS. For time frames see 7:26E-1.11(a)	7:26E-1.15(g)		
Submit all indoor air results, maps and figures to DHSS	Within 14 days of receipt of analytical results	7:26E-1.15(h)		
Remedial Action Permits				
Submit remedial action permit application for cases where a limited restricted use or restricted use NFA was issued and no RA permit was issued	Within 2 years after last biennial certification is due, but no later than May 7, 2014			7:26C-7.6(a)
Submit remedial action permit application for soil (cases not previously NFAed)	Within 30 days after deed notice requirements are satisfied			7:26C-7.6(b)1
Submit remedial action permit application for natural attenuation of ground water (cases not previously NFAed)	At the same time that a remedial action report that demonstrates that the natural attenuation remedial action is effective is required to be submitted			7:26C-7.6(b)2
Submit remedial action permit application for active ground water remediation (cases not previously NFAed)	At the same time that a remedial action report that demonstrates that an active ground water remedial action is operational is required to be submitted			7:26C-7.6(b)3
Submit application to transfer remedial action permit	At least 60 days prior to transaction that requires a permit transfer			7:26C-7.11(b)
Submit application to modify remedial action permit	Within 30 days after determination that the permit is required to be modified			7:26C-7.12(b)

Remediation Requirement	**Regulatory Timeframe**	**Tech Rule Citation**	**Mandatory Timeframe**	**ARRCS Citation**
Submit a remedial action protectiveness certification	Biennially (every 2 years) on the date established by the permit			7:26C-7.7(f)
Collect at least two rounds of ground water samples representative of the entire extent of the ground water CEA	Within 180 calendar days after the anticipated expiration date of the ground water CEA			7:26C-7.9(f)
Remedial Phase Report Requirements				
Submit clean PA or PA/SI report if contamination detected for ISRA cases	Within 1 year from when the GIN is required	7:26E-3.14(a)1	Within 2 years from regulatory timeframe	7:26C-3.3(a)1
Submit SI report if for regulated UST cases	Within 1 year after: • An inconclusive 7-day investigation • Confirmed discharge is reported • Tank closure is initiated	7:26E-3.14(a)2	Within 2 years from regulatory timeframe	7:26C-3.3(a)1
Submit RI Report – See Table 2 attached				
Submit Remedial Action Workplan	60 days prior to implementation of remedial action (unless unrestricted RAO is filed with 1 year when remediation was required to be initiated)	7:26E-5.5(a)		
Submit Remedial Action Report for Soil	3 years after the regulatory timeframe to complete the RI and submit the RIR	7:26E-5.8(b)1	Within 2 years from regulatory timeframe	7:26C-3.3(a)6
Submit Remedial Action Report for Soil and/or other medium	5 years after the regulatory timeframe to complete the RI and submit the RIR	7:26E-5.8(b)2	Within 2 years from regulatory timeframe	7:26C-3.3(a)6

Table 2. Remedial Investigation Timeframes

Remedial Investigation Statutory Timeframe Established by SRRA
N.J.A.C.58: 10C-27a3

If remediation is required to be initiated before May 7, 1999 complete the RI and submit the RIR by May 7, 2014. Regulatory and mandatory timeframes do not apply.

Note: See next page for site conditions that may allow the person conducting remediation to lengthen remedial investigation timeframes.

Regulatory Timeframes N.J.A.C. 7:26E-4.10				**Mandatory Timeframes N.J.A.C. 7:26C-3.3(a)5**
Type of remediation	**If remediation was required to be initiated before 5/7/1999, complete the RI and submit the RIR by:**	**If remediation was required to be initiated between 5/7/1999 - 3/1/2010, complete the RI and submit the RIR by:**	**If remediation was required to be initiated on or after 3/2/2010, complete the RI and submit the RIR by:**	**For all types of remediation**
ISRA - Soil Only	May 7, 2014	March 1, 2015	3 years after the PA/SI Report is due	2 years after the regulatory timeframe
ISRA – Soil and/or any other media	May 7, 2014	March 1, 2017	5 years after the PA/SI Report is due	2 years after the regulatory timeframe
Reg. UST - Soils Only	May 7, 2014	March 1, 2015	3 years after the SI Report is due	2 years after the regulatory timeframe
Reg. UST - Soil and/or any other media	May 7, 2014	March 1, 2017	5 years after the SI Report is due	2 years after the regulatory timeframe
Type of remediation	**If remediation was required to be initiated before 5/7/1999, complete the RI and submit the RIR by:**	**If remediation was required to be initiated between 5/7/1999 - 5/7/2012, complete the RI and submit the RIR by:**	**If remediation was required to be initiated on or after 5/7/2012, complete the RI and submit the RIR by:**	**For all types of remediation**
Spill Act - Soils Only	May 7, 2014	May 7, 2015	3 years after the date remediation was required to be initiated	2 years after the regulatory timeframe
Spill Act- Any Media	May 7, 2014	May 7, 2017	5 years after the date remediation was required to be initiated	2 years after the regulatory timeframe

Site Complexity Factors

Add 1 year for each - maximum of 3 additional years. DEP must be notified, on a form, if the remediating party intends to lengthen the RI
regulatory timeframe at least 30 days prior to the due date. N.J.A.C. 7:26C-3.2(b)1

1 year may be added to the RI regulatory timeframe when:

- Need to access property not owned/controlled by person responsible for conducting remediation, or
- Contamination has impacted environmentally sensitive natural resource

1 year may be added when:

- Ground water contamination exists in consolidated aquifer, or
- DNAPL present in ground water

1 year may be added when:

- Ground water contamination exists in more than one aquifer, or
- There are two or more distinct ground water contaminant plumes

Entire site remediation

For sites not subject to ISRA - 1 year may be added to the regulatory timeframe to complete the RI and submit the RI report when the person responsible intends to remediate the entire site. DEP must be notified, on a form, if the remediating party intends to lengthen the RI regulatory timeframe at least 30 days prior to the due date.

Extension of regulatory timeframe

Provide a written request for an extension of a regulatory timeframe no later than 30 days prior to the end date of the regulatory timeframe. N.J.A.C. 7:26C-3.2(b)

Extension of mandatory timeframe or expedited site specific timeframe

Provide a written rationale for the request no later than 60 days prior to the end date of the mandatory remediation timeframe or the expedited site specific remediation timeframe. N.J.A.C. 7:26C-3.5(a)1

Footnote

1. Table only includes timeframes associated with remediation established in the Technical Rules, N.J.A.C. 7:26E and ARRCS, N.J.A.C. 7:26C.

- IMMEDIATE ENVIRONMENTAL CONCERN AOCs:
  - GROUNDWATER
  - DIRECT CONTACT
  - SOIL VAPOR/INDOOR AIR
  - IMMEDIATE DEP HOT LINE REPORTING

- VAPOR CONCERN SITES
  - SOIL VAPOR/INDOOR AIR

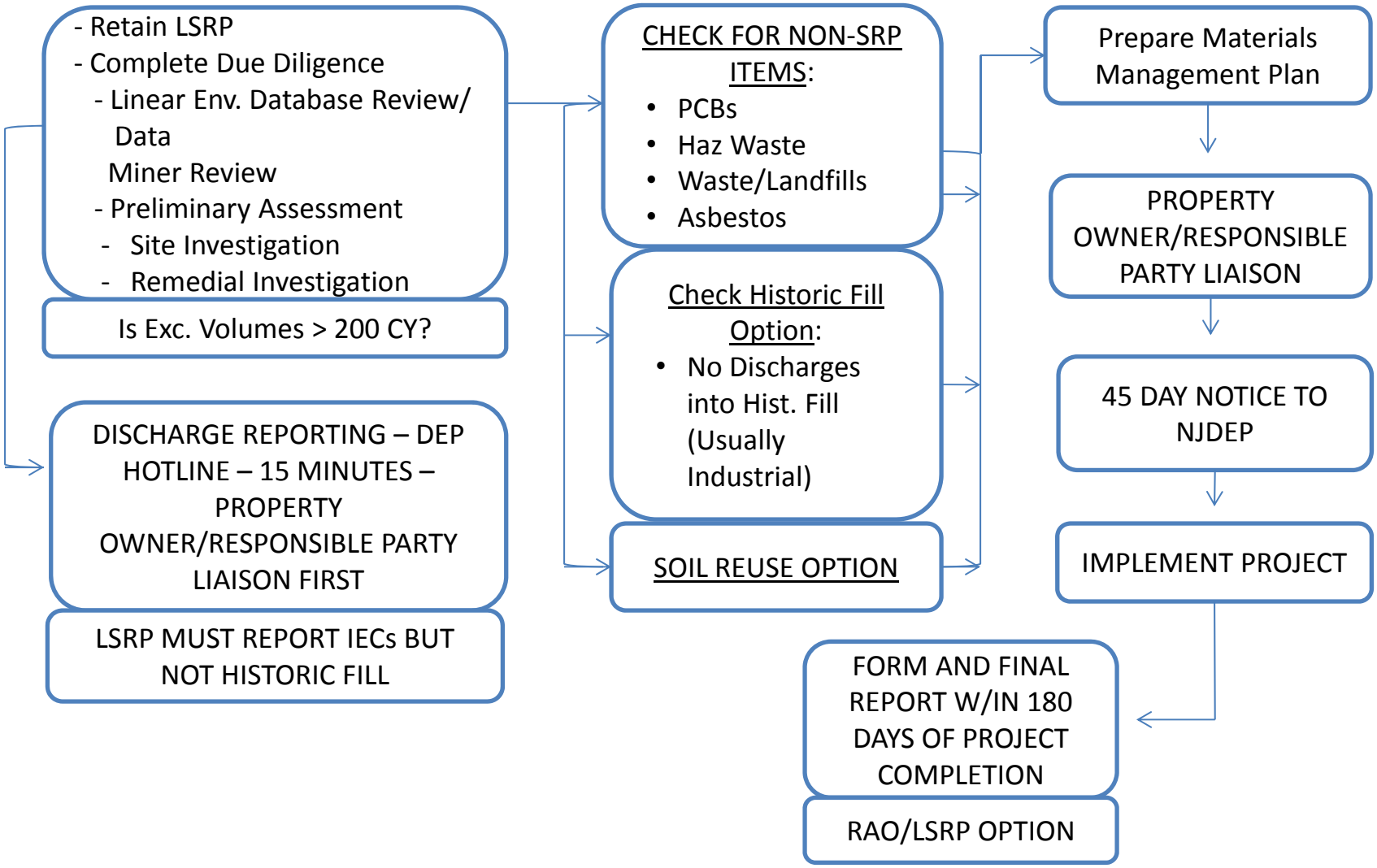
ARRCs RULES

- OBLIGATION TO REMEDIATE
- REMEDIATION TIMEFRAMES
- FEES AND OVERSIGHT COSTS
- REMEDIATION FUNDING SOURCES/FINANCIAL ASSURANCE
- FINAL REMEDIATION DOCUMENTS
- DEED NOTICES, CLASSIFICATION EXCEPTION AREAS, REMEDIAL ACTION PERMITS
- SITE ACCESS
- ENFORCEMENT

PROVISIONS IN SPECIFICATIONS

- LSRP IN CHARGE OF EXCAVATIONS OF MATERIALS WHICH CONSTITUTE A DISCHARGE, ARE WASTE OR ARE HISTORIC FILL
- RIGHT TO SAMPLE/REMOVE UNKNOWNS WITHOUT DELAY CLAIM, BUT WITH CONTINGENCY FUND SETASIDE TO MANAGE MATERIALS
- MAKE MATERIALS MANAGEMENT PLAN PART OF SPECIFICATIONS
- FIXED COST OR DAILY COST FOR TARPING/SETASIDE
- RIGHT TO REMOVE TO SECURE AREA IF IN TRAFFIC/ROW/PUBLIC AREA
- LSRP RIGHT TO TEST ALL MATERIALS USED IN "REMEDIATION" PROJECT
- REMOTE STOCKPILING OPTIONS

LINEAR CONSTRUCTION PROJECT FLOW CHART



LSRP PROGRAM

IN-DEPTH

Introduction
New Jersey Department of Environmental Protection Licensed Site Remediation Professional Program

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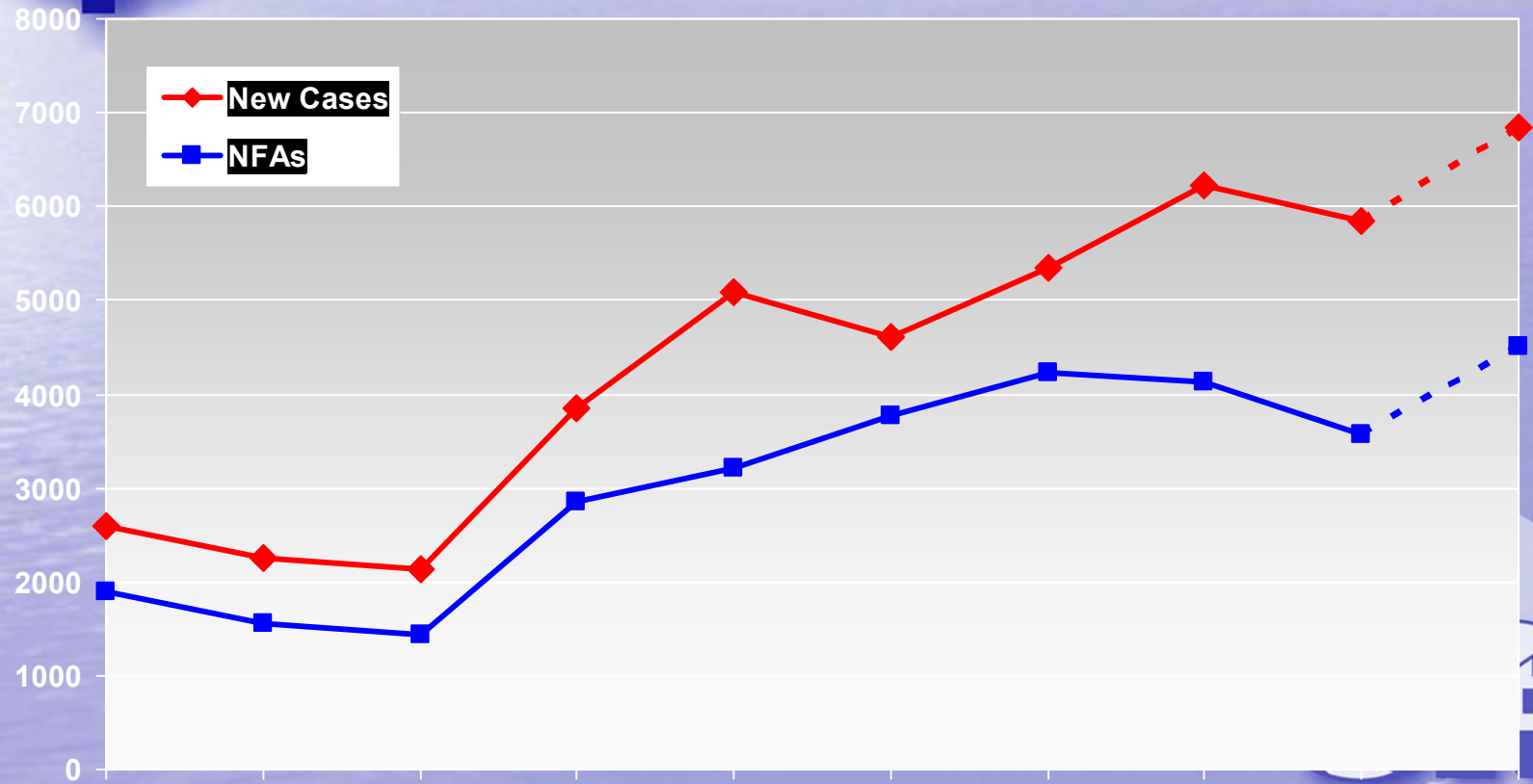
What Prompted the Need to Reform?

- More cases than DEP could handle
- Unassigned cases; un-reviewed documents
- Cases not assigned based on priorities
- Immediate Environmental Concern (IEC) cases not being worked on, i.e.
  - Contaminated drinking water
  - Indoor air issues (Vapor Intrusion)
- Some poor consultants; no authority for action
- No remediation time frames

What Prompted the Need to Reform?

Number of New Cases Versus No Further Action (NFA) Letters Issued Per Year



SRRA- Site Remediation Reform Act

Establishes affirmative obligation to remediate

2007-2009	DEP, the Legislature and Stakeholders worked together to write and pass SRRA
2009 to 2012	DEP with Stakeholder input are building the new way of doing business

Establishes the Licensed Site Remediation Professional (LSRP) Program

SRRA – Set the framework

- Provides incentives (the carrot)
  - More flexibility
  - Lower fees
  - Stakeholder input into developing rules, guidance, figuring out what works and what doesn't
- Enforcement tools (the stick)
  - Grace period violations still apply
  - Mandatory Time Frames
  - Direct Department oversight

Roles & Responsibilities

Department of Environmental Protection

- To regulate responsible parties
  - Administrative Requirements for the Remediation of Contaminated Sites (ARRCS),
  - Technical Requirements for Site Remediation,
  - Underground Storage Tank Rules,
  - Industrial Site Recovery Act (ISRA) Rules
- To inspect and review LSRP submittals to ensure that remediation is completed in accordance with the Department's standards and regulations.

Roles & Responsibilities

Responsible Party

- To remediate contaminated sites in accordance with the Department's applicable standards and regulations.
- To hire LSRPs that will oversee remediations and issue Response Action Outcome (RAO) when remediations are complete.

Roles & Responsibilities

Licensed Site Remediation Professional

- To oversee the remediation of contaminated sites in accordance with the Department's applicable standards and regulations.
- Subject to a strict code of conduct established by statute and regulation
- Must ensure that remediations are protective of human health, safety and the environment.
- Conduct of LSRPs is overseen by the Site Remediation Professional Licensing Board.

Roles & Responsibilities

Site Remediation Professional Licensing Board

- Establish licensing requirements for site remediation professionals
- Oversee the licensing and performance of site remediation professionals.
- Issues fines and penalties
- License suspension and revocation

Progress of Program to Date

(As of February 2012)

14,987 Total number of cases (849 UHOT)

4,502 Total number of LSRP cases

1,206 RAOs issued

19 RAOs Withdrawn by LSRP

0 RAOs invalidated by DEP

42 Avg. days to process LSRP submittals
(Admin, Inspection and review)

537 Number of Temp Licensed LSRPs

Committed to Success

Governor Christie and DEP Commissioner Martin are committed to success of the program

- Essential for New Jersey's economic recovery
- Important for a safe and healthy place to live, work, and play

Overview of the Licensed Site Remediation Professional Program (LSRP)

Tessie Fields
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SRRA - IMPACT ON EXISTING CASES

- Existing cases - Initiated remediation before November 4, 2009
  - Notified the Department and remediated continuously
- Work with assigned DEP case manager to obtain prior DEP approval
- Pay DEP oversight costs
- DEP will issue a No Further Action letter if remediation is complete/reviewed before May 2012

SRRA - IMPACT ON NEW CASES

- New cases – Initiated remediation on or after November 4, 2009
  - New discharge, ISRA trigger or UST discharge or discovery of past discharge
- Affirmative obligation to remediate under SRRA
- Must hire an LSRP within 45 days
- Proceed with the remediation without prior DEP approval

SRRA - IMPACT ON NEW CASES

- All cases (existing, new, and opt-in) are subject to regulatory and mandatory time frames*

  *Except unregulated heating oil tanks (UHOT) & site owned by government entity when **not** the Spill Act responsible party

- LSRP files a Response Action Outcome (RAO) with the Department when remediation is complete

MAY 2012 DEADLINE

- All remediating parties must retain LSRP to remediate sites under the new LSRP program

- DEP will not issue any NFA letters after May 2012*

  *With a few exceptions

RELATIONSHIP BETWEEN REGULATORY AND MANDATORY TIME FRAMES

- Regulatory time frame - 1 year from initiation of remediation to submit reports/forms (if applicable)
  - Preliminary Assessment/Site Investigation
  - Initial Receptor Evaluation
  - Immediate Environmental Concern (IEC) source control
  - LNAPL (free product) recovery system
  - Remedial Investigation
  - Remedial Action

Definitions

- Regulatory include examples
  - Set out in ARRCs and Tech. Regs
  - Results in fines and penalties
- Mandatory –each man. Time has corresponding reg. timeframe to keep rp on track
  - Result in direct dept. oversight

RELATIONSHIP BETWEEN REGULATORY AND MANDATORY TIME FRAMES

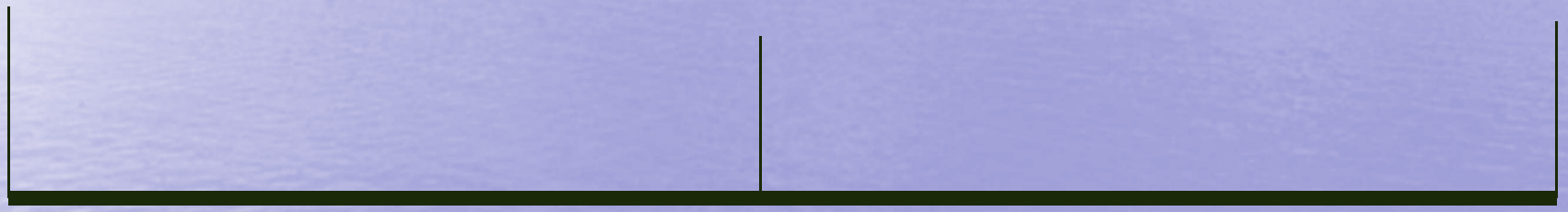
- Mandatory time frame - 2 years from initiation of remediation to submit reports/forms (if applicable)
  - Preliminary Assessment/Site Investigation
  - Initial Receptor Evaluation
  - Immediate Environmental Concern (IEC) source control
  - LNAPL (free product) recovery system

INITIAL RECEPTOR EVALUATION FOR EXISTING CASES

EXAMPLE INITIAL RECEPTOR EVALUATION FOR NEW CASES

New Discharge

April 10, 2011 **April 10, 2012** **April 10, 2013**



Regulatory Time frame

1 year

Mandatory Time frame

2 years

EXTENSIONS OF TIME FRAMES

- Regulatory time frames
  - Submit extension request form
  - Can assume "granted" unless contacted by Department
- Mandatory time frames
  - Submit extension request form – 60 days prior
  - Must be approved by Department on a case-by-case basis
- EXPEDITED TIME FRAMES
- The Department may establish expedited site specific time frames when necessary to protect public health and safety, and the environment.

REGULATORY AND MANDATORY TIME FRAMES

- What happens if a regulatory time frame is missed?
  - Remediating party is subject to fines and penalties
- What happens if a mandatory time frame is missed?
  - Remediating party is subject to direct Department oversight
  - Direct Department oversight requires posting financial assurance and the Department chooses the remedy

Exception to Man. Time frames: UNREGULATED HEATING OIL TANKS (UHOT)

- Includes above ground tanks and underground tanks that contain heating oil for on-site consumption that have a capacity of 2,000 gallons or less
- The owner of a leaking UHOT may choose to retain an LSRP or a Subsurface Evaluator to conduct the remediation
- Regulatory and Mandatory time frames DO NOT apply
- New UHOT Rules are under development
- UHOT contact Gary Sanderson – (609)633-0544

Government Exemptions Provided by SRRA

To whom do exemptions apply?

- Federal, State, County and Municipal gov. that involuntarily take over property or conduct remediation for the purpose of redevelopment

What are the exemptions?

- Mandatory time frames do not apply
- Not required to pay annual fees in years when they are not conducting remediation

Compliance Assistance

What is it exactly?

- DEP inspectors and reviewers – will continue to work with RPs and LSRPs
- Technical Consultations will continue
- Outreach prior to enforcement
  - Part of gearing up - will not continue indefinitely
  - We are working on systems to notify you before due dates
  - We are not using compliance assistance for all violations (payment of fees and oversight costs)

Enforcement

- Compliance assistance prior to enforcement
- Enforcement of reg. and man. timeframes
  - Completion of milestone phases of remediation
  - Submittal of required reports
- Enforcement applies only to RPs
- Penalties/fines will be assessed
- Direct Department Oversight
- Enforcement is critical component for success
- We are closely tracking **each case**

Overview of the LSRP Process

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"MILESTONE" DOCUMENTS

- Many of the required "milestone" documents (reports) are still required to be submitted to the Department
  - Preliminary Assessment/Site Investigation (PA/SI)
  - Remedial Investigation Report (RIR)
  - Remedial Action Workplan (RAW)
  - Remedial Action Report (RAR)
- New requirement- Receptor Evaluation Report/Form
- New requirement– Remedial Action Outcome (RAO) [new/opt in cases only; only LSRP can complete]

INSPECTION OF FORMS & REVIEW OF REPORTS

- Forms are designed to provide critical information about a site and help determine if more detailed review is necessary
- Department will inspect all forms submitted by LSRPs instead of conducting detailed review of reports
- Assigned case managers are being replaced by inspectors and reviewers
- Inspection/Review process
  - Does not stop remediation process
  - LSRP does not need prior DEP approval (except for permits)

INSPECTION AND REVIEW PROCESS

- The inspection and review process will allow transition from the DEP "command and control" to the LSRP being in charge
- LSRP will using professional judgment
- Prescriptive requirements removed from rules and put into guidance
- Currently using "Compliance Assistance" for LSRP cases will call the LSRP/RP to resolve questions related to a case
- The Department is committed to completing reviews in a timely manner (40 days total)
- Positive Feedback

RESPONSE ACTION OUTCOME (RAO)

- Issued by LSRP, filed with the DEP but no DEP approval necessary
- RAO is equivalent to No Further Action letter – covenant not to sue inherent in RAO
- Average RAO review time less than 30 days!
- As with NFA Letters, the Department can invalidate RAOs

Data Miner – Status of Case

Best to know Preferred Identification Numbers (PI #)

In **Data Miner** Select:

1. Reports by Category
2. Site Remediation
3. Access Site Search Reports
4. All SRP Sites by Selected PI Number
5. Site Activity Info. / Site Detail
6. Case Oversight Info. For Record Activity # = LSR and Document Status = Active
7. Activity Tracking
8. LSD Record = LSRP Key Document Submittals
9. LSR Record = LSRP Case Status

LSD 110002

Activity Class Description:	LSRP Key Document Submittal
Activity Type Description:	RAO (Area of Concern)

Assigned To	Description	Completed Date	Activity Class Description	Activity Type Description	PI Nur
Chudzik, Michael	LSRP Submittal Administratively Complete	10/27/2011	LSRP Key Document Submittal	RAO (Area of Concern)	557868
Hendricks, Lee	LSRP Remedial Phase Report Inspected	3/9/2012	LSRP Key Document Submittal	RAO (Area of Concern)	557868
Gard, Diane	LSRP Remedial Phase Report Reviewed	3/14/2012	LSRP Key Document Submittal	RAO (Area of Concern)	557868
.	Document Review Completed	3/21/2012	LSRP Key Document Submittal	RAO (Area of Concern)	557868

LSR 110001

Activity Class Description:	Licensed Site Professional Program
Activity Type Description:	LSRP New Case

Assigned To	Description	Completed Date	Activity Class Description	Activity Type Description	PI Nur
SRP Clearing House, LSRP	LSRP Date of Triggering Event	5/25/2011	Licensed Site Professional Program	LSRP New Case	557868
SRP Clearing House, LSRP	LSRP Retention Form Received	7/11/2011	Licensed Site Professional Program	LSRP New Case	557868
Chudzik, Michael	RAO-A (Unrestricted Use) Filed	9/20/2011	Licensed Site Professional Program	LSRP New Case	557868
SRP Clearing House, LSRP	LSRP Annual Remediation Fee Form Received	9/20/2011	Licensed Site Professional Program	LSRP New Case	557868
SRP Clearing House, LSRP	LSRP Initial Report Received	9/20/2011	Licensed Site Professional Program	LSRP New Case	557868
SRP Clearing House, LSRP	Site Investigation Report Received	9/20/2011	Licensed Site Professional Program	LSRP New Case	557868
Gard, Diane	RAO-A (Unrestricted Use) Filed	3/20/2012	Licensed Site Professional Program	LSRP New Case	557868
.	Document Closed	3/21/2012	Licensed Site Professional Program	LSRP New Case	557868

RAO REVIEW

- DEP will only invalidate an RAO within 3 years if:
  - The remediation is not protective and
  - The remediating party will not conduct necessary work
  - Order of magnitude change
- Similar to rescinding NFA letters – invalidation of RAOs should be an infrequent occurrence

"THREE YEAR REOPENER"

- After 3 years, DEP may not audit an RAO unless:
  - New contamination is identified
  - The board conducts an investigation of the LSRP, or
  - The LSRP has had their licensed revoked

Remedial Action Permits

Required prior to RAO

- Remedial Action Permits required for when soil and/or ground water contamination remain above applicable standards
- Two party permittees – discharger and current owner
- Deed Notice and Classification Exception Areas remain as institutional controls
- Protectiveness Certification (Biennial Cert.) still required
- Annual fee

OVERVIEW OF FUNDING SOURCES and OTHER KEY ISSUES

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TOPICS

- FEES
- FUNDING SOURCES
- DUE DILIGENCE
- REMEDIAL PRIORITY SCORING SYSTEM
- TRAINING AND TOOLS

Annual Fees/Billing

Previous Billing Method

- Invoices arrived unexpectedly
- Staff hours listed for case review
- Problem: No predictability for budgets

New Billing Method

- One annual bill based on date of triggering event
- Fees are known based on published fee schedule
- Resolution: Allows predictability for budgets

Fees - What is the Correct Fee?

- Annual Remediation Fee based on the number of contaminated soil areas of concern and media impacted

- 4 Soil AOC Fee categories
  - Cat 1 0 to 1 contaminated AOCs $450
  - Cat 2 2 to 10 contaminated AOCs $900
  - Cat 3 11 to 20 contaminated AOCs $5000
  - Cat 4 >20 contaminated AOCs $9500

- 3 Contaminated Media Fee categories - $1400 for each impacted media
  - GW contamination
  - Surface Water Sediment contamination
  - Contaminated ground water above a Surface Water Quality Standard that is an unpermitted discharge to surface water

- **LSRP cannot issue RAO until all fees have been paid**

REMEDIATION FUNDING SOURCE (RFS)

- RFS is a financial mechanism used to secure funding for remediation of a contaminated site
- RFS must be established for:
  - ISRA cases at RAW phase
  - Remediation Agreement (Remediation Certification)
  - Spill Act Directives
  - State Orders
  - Administrative Consent Orders
  - Court Orders

REMEDIATION FUNDING SOURCE (RFS)

- Types of RFS Mechanisms
  - Remediation Trust Fund
  - Environmental Insurance Policy
  - Line of Credit
  - Self Guarantee

- Must pay the Department a 1% surcharge of the RFS annually until NFA or RAO issued (except self guarantees)

FINANCIAL ASSURANCE (FA)

- FA is a financial mechanism used to secure funding for the maintenance of engineering controls at a contaminated site
- FA is required to be maintained for the duration of the Remedial Action Permit that includes engineering controls
- Does not require the payment of an annual surcharge and cannot use Self Guarantee

DUE DILIGENCE

- Any person conducting due diligence is NOT required to hire an LSRP when the person:
  - Does not own the property in question, and
  - Conducts a PA/SI for the purpose of conducting all appropriate inquiry into previous ownership and uses of the property, and
  - Has not discharged a hazardous substance nor is in any way responsible for the discharge of a hazardous substance at the site
- Phase I vs. Preliminary Assessment

LINEAR CONSTRUCTION

IN-DEPTH

Linear Construction Projects Rules and Technical Guidance

May 30, 2012

Tessie Fields and Kirstin Pointin-Hahn, DEP
Alyssa Wolfe, WSRR

LCPs
Background and Overview

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How were linear construction projects handled in the past?

- Because there were no rule requirements for LCPs, cases entered SRP and followed the old paradigm
  - Assigned case manager
  - Followed the Technical and Oversight Rules
  - Paid oversight costs
  - Submitted periodic reports
- The process needed to be re-thought under the LSRP program

Linear Construction Requirements Were Adopted into Rule
N.J.A.C. 7:26C-16

- ARRCS rules were adopted May 7, 2012
- Rule requirements include
  - Definition of Linear Construction Project
  - Requirement to hire an LSRP
  - Submittal of notification form and final report
  - Pay fees at the start and end of project
  - Refers to guidance
- All other Department rules apply (Solid Waste, Hazardous Waste, permits etc.)

Linear Construction Technical Guidance

- Guidance and rules work together
- Contains the "how to" comply with the rules
- LSRPs will apply professional judgment
- Current guidance will be modified soon to reflect the rule adoption

What is a linear construction project (LCP)?

Definition of Linear Construction Project - N.J.A.C. 7:26C-1.3

Construction and development activities within an area such as a public or private roadway, railroad, or utility line and the rights-of-way thereto that are undertaken to create, maintain or alter the public or private roadway, railroad or utility line that:

1. Includes one or more contaminated properties, or parts of properties; and

2. Will generate more than 200 cubic yards of contaminated soil for fill or disposal during the duration of the linear construction project.

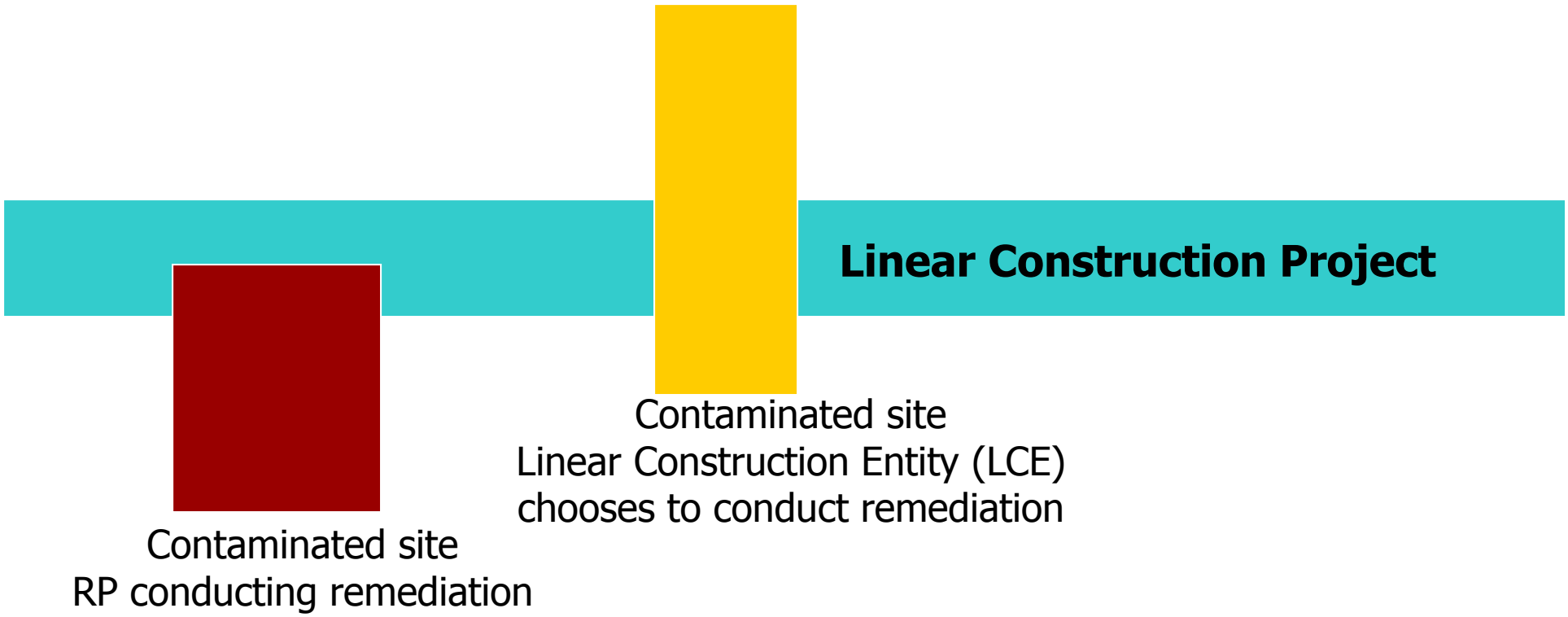
What if the LCP will generate less than 200 yds^3 of contaminated soil?

- Project that will generate < 200 yds^3 of contaminated soil are **not** required to notify the Department or follow the rules or guidance

- It is **strongly recommend** that all LCPs follow the materials management portions of the guidance

- All projects must comply with the Department's waste management rules

What is a linear construction project?



What is a linear construction project?

Will it be more than 200 yd^3 ?

What is a linear construction project?

Will it be more than 200 yd^3 ?

You need to define your project.

Who <u>can use</u> the linear construction guidance?

A person or entity conducting an LCP that is <u>not a responsible party</u> pursuant to:

- Brownfield and Contaminated Site Remediation Act (N.J.S.A. 58:10B-1.3)
- Spill Compensation and Control Act (N.J.S.A. 58:10-23.11 et seq.) or
- NJ Underground Storage of Hazardous Substances Act (N.J.S.A. 58:10A-21 et seq.)

Who cannot use the linear construction guidance?

Any responsible party

Responsible parties are required to conduct remediation pursuant to the ARRCS and Technical rules

What is the basic concept?

The person conducting the LCP…

- Is not required to remediate contamination for which they are not responsible, **BUT**
- If they choose not to conduct the remediation they must provide the responsible party access to remediate contamination located within the project area

Continuing obligations of the responsible party

- The person responsible for conducting remediation
  - Has an affirmative obligation to remediate
  - Must comply with regulatory and mandatory timeframes
  - Is subject to fines and penalties for non-compliance

What is the process for Linear Construction Projects?

- Due diligence is part of Linear Construction Entities' standard operating procedures
- Pre-project sampling is recommended but is not required by the Department
- Due diligence and pre-project sampling are essential to project planning and design
- Conduct sampling as needed – where is the project?
  - Undeveloped green field?
  - Adjacent to a refinery?

What is the process for Linear Construction Projects?

If you meet the definition of a LCP…

- Hire an LSRP
- Submit the LCP Notification Form to DEP at the start of the project
  - Summary of project
  - Name and location of contaminated sites anticipated
  - Name of the LSRP
  - Pay a fee
- Follow the guidance
- LSRP will use professional judgment

The Process For Linear Construction Projects

- Handle contaminated media consistent with DEP rules and guidance
- Cap to prevent exposure to remaining contamination (6 inches of clean fill, asphalt, concrete)
- LSRP submit a final report at end of project
- Final report documents that the rules and guidance were followed
- No NFA or RAO is required
- If an RAO is wanted - follow the Technical and ARRCS Rules (SI/RI/RA annual fees etc.)

What are the "Big Ticket Items?"

- Delineation of contamination is not required outside the LCP excavation area
- Contaminated soil may be returned to the excavation (not free/residual product or RCRA hazardous waste)
- The LCE is not responsible for establishing or maintaining engineering or institutional controls (remedial action permits)
- Soil reuse within the LCP must be consistent with DEP rules and guidance

Don't make it worse!

Other Highlights of Linear Construction Technical Guidance

- Public notification and outreach is not required
- Can assume that "historic fill" is contaminated without sampling
- A ground water investigation is not needed for historic fill

Final Report

- Submit final report with a form to DEP within 180 days after completion of the project
- LSRP does not issue an RAO
- If the LCE wants an RAO for the part or all of the project, remediation must be conducted pursuant to ARRCS and the Tech Rules.

LINEAR CONSTRUCTION TECHNICAL GUIDANCE - DETAIL

- This technical guidance describes certain practices that should be used to address contamination that is identified during a linear construction project. The guidance includes information on roles and responsibilities, project planning and implementation, best management practices for health and safety and contaminated media management, reporting, fees, and the involvement of Licensed Site Remediation Professionals.

- If the person conducting a linear Construction does not consider the Department's Guidance appropriate or necessary, an adequate explanation and justification should be provided in their final report to the Department.

- This guidance document applies to linear construction entities that are not subject to the Spill Compensation and Control Act (Spill Act), N.J.S.A. 58:10-23.11 et seq. or the New Jersey Underground Storage of Hazardous Substances Act (USHS Act), N.J.S.A. 58:10A-21 et seq. Simply put, the person conducting a linear construction project must not have caused a discharge of hazardous substances or be in any other way responsible (See N.J.S.A. 58:10-23.11g10). If a linear construction entity causes a discharge or chooses to take a remediation over for a responsible party the remediation must be conducted in full compliance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E and the Administrative Requirements for Site Remediation, N.J.A.C. 7:26C. If the person conducting a linear construction project chooses not to take on the remediation, they must provide responsible parties access to remediate contamination located within the project area.

- If the person conducting a linear construction project is not required to delineate or remediate contamination outside the limit of the excavation area within the linear construction corridor.

ROLE OF THE PERSON CONDUCTING A LINEAR CONSTRUCTION PROJECT

- The person conducting a linear construction project should:
  - Hire a Licensed Site Remediation Professional to oversee the management of contamination encountered during the linear construction project;
  - Submit a notification form to the Department (a call to the DEP hotline is not needed, except as provided below);
  - Conduct the linear construction project following this and other DEP technical guidance and proceed without Department's prior approval;
  - Pay all applicable fees as required pursuant to N.J.A.C. 7:26C-4; and
  - Submit a final report to the Department 180 days after the completion of a construction of a linear construction project.

RESPONSIBILITIES - NOTIFICATION

- During the construction project when contamination above a remediation standard is discovered that is not already known to the Department, the person conducting a linear construction project should immediately notify the Department via the DEP hotline at 1-877 WARNDEP or 1-877-927-6337. The hotline operator should be told that a discharge has been identified at a specified linear construction project and name of the property owner. The person conducting a linear construction project should also notify the property owner of the discharge, in writing and include a copy of that notification to the Department in the linear construction project final report.

- In addition, the person conducting a linear construction project should call the DEP hotline when certain environmental conditions are identified and report to the hotline operator that call/notification is related to a specified linear construction project. The person conducting a linear construction project should call the hotline if the following conditions are identified:
  - An environmental emergency, after 911 is called;
  - Immediate environmental concern condition; and
  - Discovery of any regulated underground storage tank or any leaking unregulated underground storage tank.

OTHER REQUIREMENTS AND PERMITS

- This guidance does not relieve any person from complying with more stringent requirements or provisions imposed by any other Federal, State or local applicable statutes or regulations; or obtaining any and all permits required by State, Federal or local statute or regulation, including EPA's TSCA regulations, except as expressly provided herein.
- If a linear construction project will involve the disturbance of an existing institutional or engineering control the requirements of the ARRCS rule at N.J.A.C. 7:26C-7.9 will apply. The person conducting a linear construction project should coordinate the disturbance of the control with the person that is responsible for that control.

MATERIALS MANAGEMENT PLAN

- The person conducting a linear construction project should develop a materials management plan to provide a defined set of procedures to be employed when contaminated soil and ground water are encountered during construction activities. The person conducting a linear construction project should include in the materials management plan a summary of the findings of the background research, due diligence, and pre-construction sampling described in Section 3.1. The materials management plan should set forth the procedures for project specific, and site-specific, soil management, ground water management and health and safety plans.

Key components of the materials management plan include, as applicable:

- A description of the project, including construction methods and schedule;
- Maps showing project alignment, areas of contamination, results of pre-construction sampling;
- Soil management procedures (including a fill use plan as applicable);
- Dewatering management procedures;
- Health and safety procedures;
- Compliance with codes, standards, ordinances and permits; and
- Emergency response procedures; and
- Reporting procedures.

SOIL MANAGEMENT

Based on the results of the pre-construction sampling investigation, the person conducting a linear construction project should develop a materials management plan that includes:

- Removal and disposal of contaminated soil;
- Avoidance of contaminated areas (i.e., revision of construction plan);
- Design modification;
- Containment of contaminants; and
- Soil reuse.

The materials management plan should take into account:

- The nature and extent of contamination;
- Land use and public concern; and
- Potential hazards experienced during construction activities.

Once the materials management plan is in place the following aspects of the plan should be considered:

- A description of the preferred action;
- Specific engineering construction considerations required to implement the action;
- Environmental impacts and proposed methods for mitigating any adverse effects;
- Off-site disposal and transportation needs;
- Soil reuse requirements;
- Temporary storage requirements;
- Decontamination procedures; and
- Recommendations and conceptual descriptions of Health and Safety Plans that may be required to protect the welfare of on-site personnel and those who may become exposed to contaminants.

- The materials management plan should be prepared using this guidance document and be consistent with the Department's Alternative and Clean Fill Guidance for SRP Sites. The materials management plan should describe the person conducting a linear construction project's techniques for managing contamination in order to protect adjoining properties, prevent release of contaminated material into the environment within the project limits against exposure to contamination. The person conducting a linear construction project should include contingency plans for excavation, stockpiling, transporting, measurement and disposal of contaminated materials as part of their materials management plan.

DEWATERING MANAGEMENT

Based on the results of the pre-construction ground water sampling investigation, the person conducting a linear construction project should develop a materials management plan listing the actions associated with the management of contaminated dewatering fluids. For a particular linear construction project, the following water management alternatives should be evaluated:

- Removal and disposal of contaminated water;
- On-site treatment;
- Permit requirements; and
- Avoidance of the contaminated areas.

- In the event that free product is encountered during excavation, the person conducting a linear construction project should remove free product from the excavation and dispose of it properly. It is important that the person conducting a linear construction project uses construction methods that will prevent the excavation from serving as a conduit for the spread of free product along the pathway created by the linear construction project. The person conducting a linear construction project is not responsible for delineating or remediating the extent of free product or other ground water contamination beyond the limits of the excavation corridor.

WATER DISCHARGE PERMITS

If the person conducting a linear construction project needs to dewater an excavation as part of a linear construction project, there are at least four potential options for managing the generated fluids, which are:

1) Discharge to surface water;
2) Discharge to ground water;
3) Discharge to a sanitary sewer; and
4) Transportation to a permitted treatment facility.

- Discharge to surface water and ground water may require permits, as discussed below. Discharge to a sanitary sewer will require a permit from the receiving utility. The selection of the fluid disposal method will depend on several factors, including anticipated dewatering rates, proximity of storm sewers and surface water bodies, the permeability of the subsurface materials, ground water quality, and others.

- New Jersey Pollution Discharge Elimination System (NJPDES) Discharge to Surface Water (DSW) Permits are issued by the NJDEP-Division of Water Quality. A separate permit may be required for each discharge occurrence (i.e., each discharge with a discrete discharge location) within the linear construction project; alternatively, several discharge locations within one drainage basin may be combined in one permit. When applying for a Discharge to Surface Water Permit, the person conducting a linear construction project must document that the municipality or utility responsible for the maintenance of the storm sewers has been notified of the requested permit. The permit checklists and forms can be accessed at the following NJDEP links:

  http://www.nj.gov.dep/dwq/gp surfacewater.htm

  http://www.nj.gov.dep/dwq/gp BGR.htm

- Discharge to Ground Water Permits will be issued by the Site Remediation Program for linear construction projects. Refer to SRP forms and guidance for the issuance of discharge to ground water permits and a quick reference guide available on this topic at:

  http://www.nj.gov/dep/srp/srra/training/matrix/quick_ref/proposal_dgw_permits.pdf

- If the dewatering effluents require treatment prior to discharge to surface water or discharge to ground water, it is likely that a Treatment Works Approval will be required prior to application for the discharge permit.

- In addition to the discharge permits described above, if the discharge will be more than 100,000 gallons per day and continue for more than 30 days in a 365 day period from one location, a temporary dewatering Water Allocation Permit from the Bureau of Water Allocation and Well Permitting pursuant to N.J.A.C. 7:19 et seq. may be needed. The person conducting a linear construction project should confer with the Bureau of Water Allocation and Well Permitting to determine the need for water allocation permits.

- The person conducting a linear construction project must determine the project specific permit details in discussion with the issuing authority. A summary of the permits obtained and the permitted activity should be documented in the final report, described in 4.2.

EXCAVATION PROCEDURES

The person conducting a linear construction project's material management plan should identify the procedures to be followed to manage soil excavated during construction, and the criteria for determining which soils can be reused and the disposal requirements for soils not reused in the project. The person conducting a linear construction project must comply with applicable State and local laws and regulations governing construction projects and must be responsible for the proper management of excavated material. The materials management plan should describe the intended methods for excavation, movement, reuse and disposal of contaminated soil. The person conducting a linear construction project is responsible for obtaining all necessary permits, including permits to discharge dewatering effluents to groundwater, surface water, and/or sanitary sewers.

STOCKPILING/TEMPORARY STORAGE

- The person conducting a linear construction project should include provisions in its materials management plan for stockpiling and temporary storage of excavated contaminated material that will be reused during the project in accordance with Section 3.3.4, or will be stockpiled for disposal. The goal is to prevent contact with contamination in order to protect human health and to prevent contaminated material from migrating beyond temporary stockpiles. Locations for temporary stockpiles are selected by the person conducting a linear construction project based on field conditions, but when feasible should be located within the boundaries of the linear construction project. Stockpiles should be placed on an impervious surface or plastic sheeting and securely covered with plastic sheeting to prevent wind dispersion and contact with rainfall and other weather. The piles should be contained with hay bales or silt fence to prevent migration of contaminants into adjacent soil, surface water, and ground water. Stockpiles must be covered and secured at the end of each day or whenever there is a potential for the migration of contaminated material from the stock pile. Alternatively, contaminated material may be stored in containers, preferably with a liner. Containers should be covered to prevent wind dispersion and contact with rainfall or other weather.

- Stockpiled contaminated material intended for off-site disposal should be removed from the site as soon as possible, but not longer than 180 days pursuant to applicable solid waste requirements and no longer than 90 days for material that is characterized as hazardous waste pursuant to applicable hazardous waste requirements.

BACKFILL WITHIN EXISTING EXCAVATION

- Excavated contaminated material can be replaced directly back into the excavation as backfill except when it contains free and/or residual product. Generally, six inches of clean fill, or other suitable capping material (asphalt or concrete material), should be placed at the surface to prevent direct contact exposure, unless the Department has more stringent requirements such as the Department's chromium guidance (available at: http://www.state.nj.us/dep/dsr/chromium/crmorlift200702.pdf). The Department acknowledges that some linear construction projects will dictate the requirements for type of backfill and surface materials that is needed. The Department's primary concern is that contamination not be left at the ground surface where there are either human health or environmental exposure concerns.

SOIL REUSE WITHIN LINEAR CONSTRUCTION PROJECT

- The person conducting a linear construction project may use excavated contaminated soil within other areas of the linear construction project as backfill consistent with the Department's Alternative and Clean Fill Guidance for SRP Sites. Soil that contains free and/or residual product, buried containers may not be used as backfill within other areas of the linear construction project.

- To facilitate the reuse of excavated contaminated material, the person conducting a linear construction project's materials management plan should contain a soil reuse plan consistent with the Department's Alternative and Clean Fill Guidance for SRP Sites. The soil reuse plan should be based on sufficient characterization of the soils in the donor and receiving areas, and comply with the "like-on-like" principle and the 75 percentile test to ensure that the reuse of soil must not worsen the receiving site's condition by either increasing the contaminant concentration or introducing additional contaminants not already present.

CLEAN FILL

- The person conducting a linear construction project may use clean fill for the purposes of capping contaminated soil within the linear construction project. Clean fill must be consistent with the Department's Alternative and Clean Fill Guidance for SRP Sites and meet applicable Federal, State and local standards for fill. Any material excavated from other portions of the project exhibiting possible contamination (staining, odors, etc.) may not be used as clean backfill unless demonstrated as such through analytical testing. Records documenting the use of clean fill during the project should be included in the Linear Construction Final Report in accordance with Section 4.2.

SITE RESTORATION/CAPPING

- To isolate contaminated material that has been reused or left in place, the person conducting a linear construction project may use pavement (asphalt or concrete), retaining walls, or a minimum of six inches of clean fill as containment methods unless the Department has more stringent requirements. The person conducting a linear construction project may use clean fill on embankments and other areas along with landscaping features such as grass, bushes, or trees and should restore the topography, vegetation, and hydrology to original conditions.

- The person conducting a linear construction project must remove soil containing free and/or residual product that is present within the construction corridor during the removal of the tank to the extent practical and should collect a ground water sample from a temporary well point when an underground storage tank has discharged, and any portion of the tank is located within seasonal high ground water or within two feet of ground water and/or bedrock. Other acceptable sampling methods provided in the Department's Field Sampling Procedures Manual may be used to collect a ground water sample. The ground water sample should be analyzed for contaminants that are associated with the product that the tank is suspected to contain. If the tank product is unknown analyze the ground water for TAL/TCL contaminants. The person conducting a linear construction project is not required to conduct any delineation or further remediation of any contamination encountered.

OTHER IMPLEMENTATION ISSUES

- The person conducting a linear construction project is not required to obtain remedial action permits (deed notice or ground water classification exception area) for contamination that is left within the construction corridor. These permits and controls are the responsibility of the person responsible for conducting the remediation.

RESPONSE ACTION OUTCOME

- The Department does not require the Licensed Site Remediation Professional to issue or file a Remedial Action Outcome at the completion of a linear construction project. If the person conducting a linear construction project wants a Remedial Action Outcome for the entire project or a portion of the project, the Licensed Site Remediation Professional is required to conduct remediation pursuant to the Administrative Requirements for the Remediation of Contaminated Sites rules, N.J.A.C. 7:26C and the Technical Requirements for Site Remediation, N.J.A.C. 7:26E.

FEES

- The person conducting a linear construction project should pay a fee of $450 pursuant to N.J.A.C. 7:26C-4.2(a)2i when the initial notification of the linear construction project is submitted to the Department.

New Jersey Department of Environmental Protection
Site Remediation Program

LINEAR CONSTRUCTION PROJECT (LCP) NOTIFICATION AND FINAL REPORT FORM

Date Stamp
(For Department use only)

SECTION A. PERSON CONDUCTING A LINEAR CONSTRUCTION PROJECT CONTACT INFORMATION

Name:

Phone: Ext: Fax:

Project Coordinator Name: Title:

Street Address:

Municipality: (Township, Borough or City)

State: Zip Code:

Email Address:

If there is a change in person conducting an LCP or the LSRP contact information, please submit an amended form.

SECTION B: SUBMITTAL TYPE (select one)

☐ **Initial Notification**

1. Initial notification of the linear construction project: Start Date:
   Projected End Date:
2. Is soil reuse planned for this project? ..... ☐ Yes ☐ No ☐ Unknown
   If "Yes," provide brief description:

☐ **Final Report**

Did the person conducting the linear construction project vary from the NJDEP's Linear Construction Technical Guidance? ..... ☐ Yes ☐ No

Provide a brief description of how the project varied from the Linear Construction Technical Guidance:

SECTION C: FEES

Initial Notification Fee
☐ $450.00

OR

Final Report Fee based on number of contaminated properties or parts of properties
☐ $1,000.00 for 1 – 5 properties
☐ $3,000.00 for 6 – 10 properties
☐ $5,000.00 for 11 or more properties

Fee Billing Contact:

Business Name:

First name of Contact: Last name of Contact:

Title:

Phone Number: Ext.: Fax:

Mailing Address:

City/Town: State: Zip Code:

Email Address:

SECTION D: DESCRIPTION OF THE LINEAR CONSTRUCTION PROJECT

Project Name: _____

Project Type: (check all that apply)

- ☐ Public Right of Way/Easement
- ☐ Utility Easement
- ☐ Road/Rail
- ☐ Natural Gas
- ☐ Water System
- ☐ Electric
- ☐ Telecommunications Systems
- ☐ Sanitary/Combined Sewerage System
- ☐ Other _____

Brief description of project:

Municipality(s) and county(s) where the project is being conducted (attach additional pages as necessary)

Municipality: _____ County: _____

Municipality: _____ County: _____

Municipality: _____ County: _____

Municipality: _____ County: _____

SECTION E: DESCRIPTION OF ANTICIPATED / ENCOUNTERED CONTAMINATED PROPERTIES WITHIN THE LCP
(attach additional pages as necessary)

1. Property Name: _____
   Program Interest (PI) Number: _____
   Street Address: _____
   Municipality: _____ (Township, Borough or City)
   State: _____ Zip Code: _____
   Provide a brief description of the nature and extent of contamination anticipated / encountered:

2. Property Name: _____
   Program Interest (PI) Number: _____
   Street Address: _____
   Municipality: _____ (Township, Borough or City)
   State: _____ Zip Code: _____
   Provide a brief description of the nature and extent of contamination anticipated / encountered:

3. Property Name: _____
   Program Interest (PI) Number: _____
   Street Address: _____
   Municipality: _____ (Township, Borough or City)
   State: _____ Zip Code: _____
   Provide a brief description of the nature and extent of contamination anticipated / encountered:

SECTION F. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: _____

First Name: _____ Last Name: _____

Phone Number: _____ Ext: _____ Fax: _____

Mailing Address: _____

City/Town: _____ State: _____ Zip Code: _____

Email Address: _____

This statement shall be signed by the LSRP who is submitting this Linear Construction notification or final report pursuant to N.J.A.C. 7:26C-16.

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:

[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:

☐ *directly oversaw and supervised all of the referenced remediation, and\or*

☐ *personally reviewed and accepted all of the referenced remediation presented herein.*

I believe that the information contained herein, and including all attached documents, is true, accurate and complete. It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.

My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: _____ Date: _____

LSRP Name/Title: _____

Company Name: _____

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

HISTORIC FILL & DIFFUSE ANTHROPOGENIC MATERIALS

IN-DEPTH

Historic Fill Material and Diffuse Anthropogenic Pollutants Technical Guidance

Introduction and Background

In 1993 the Legislature directed DEP to

- Develop procedures to demonstrate the presence of historic fill material, and
- Establish remediation requirements
  - To prevent exposure
  - To allow for the continued use of the property
  - That are less costly than removal or treatment, and
  - Are protective of human health and the environment

In 2003, DEP adopted procedures for historic fill material in the Technical Rules

- Still in effect today

Introduction and Background

- Technical Rules allow the remediating party to either
  - **Sample** the fill for typical contaminants, or
  - **Assume** that the fill was contaminated

- Institutional (Deed Notice) and engineering controls (Cap) are the "standard" for historic fill material

- The list of contaminants/concentrations from Table 4-2 can be provided on the Deed Notice for the site

Historic Fill Table - Ni.A.C. 7:26E-4.6

TABLE 4-2
Summary of Target Contaminant Concentrations in Typical Historic Fill Material

Contaminant (ppm)	Maximum	Average
Benzo(a)anthracene	160	1.37
Benzo(a)pyrene	120	1.89
Benzo(b)fluoranthene	110	1.91
Benzo(k)fluoranthene	93	1.79
Indeno(1,2,3-cd)pyrene	67	1.41
Dibenz(a,h)anthracene	25	1.24
Arsenic	1098	13.15
Beryllium	80	1.23
Cadmium	510	11.15
Lead	10700	574
Zinc	10900	575

Note: Table 4-2 was deleted from from proposed Technical Rules

Intended Use of the Guidance Document

After May 2012 - Rules

- Less detailed requirements for historic fill material
- Addresses Diffuse Anthropogenic Pollutants (DAP) for the first time

After May 2012 - Guidance

- Recommended procedures for the investigation and remediation of historic fill material and associated ground water contamination

- Recommended procedures for the investigation and remediation of and DAP

Definition of Historic Fill material

What it is

- Non-indigenous material, deposited to raise the topographic elevation of the site
- Was contaminated prior to emplacement
- Is in no way connected with the operations at the location of emplacement
- Includes construction debris, dredge spoils, incinerator residue, demolition debris, fly ash, or non-hazardous solid waste

Definition of Historic Fill material

What it isn't

- Any material which is substantially chromate chemical production waste
- Other chemical production waste
- Waste from processing of metal or mineral ores, residues, slag or tailings
- A municipal solid waste landfill site

Definition of Diffuse Anthropogenic Pollutants* (DAP)

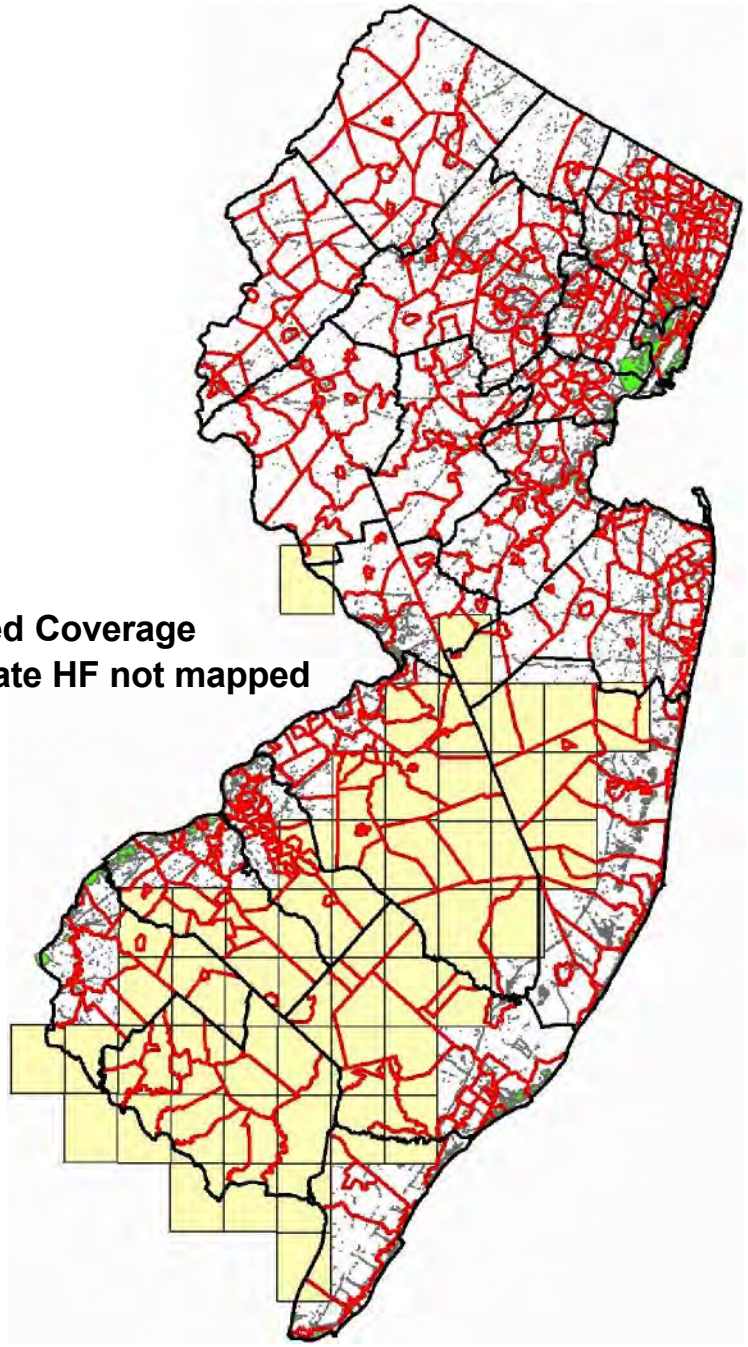
- Broadly distributed contaminants, often arising from multiple sources, which have been historically generated by human activities
- Generally from atmospheric deposition, but may contain contributions from random, non-point sources that are **not attributed to a discharge at the site**
- Typically contains PAHs and metals above health-based soil remediation standards

*Defined in proposed Technical Rule

Preliminary Assessment

- Evaluate the presence of historic fill material as part of the PA (if a PA for the site is required)
- If a PA for the site is not required, evaluate the presence of historic fill material as part of the SI
- Evaluate by reviewing available historical site records, maps and aerial photographs
- Should include review of the NJGS historical fill maps available for much of New Jersey at www.nj.gov/dep/njgs/geodata/dgs04-7.htm

NJGS Historic Fill Mapped Coverage
Note Yellow Boxes Indicate HF not mapped



Digital Geodata Series

DGSO4-7 Historic Fill For New Jersey As Of February 2009

IMAGE METADATA PagiNglikgida

Abstract

The "Brownfield. and Contaminated Site Remeclia.tion Act" (N.J.S.A. 58:10B-1 et seq.) requires the Department of Environmental Protection to map regions of the state where large areas of historic fill exist and make this information available to the public. These maps show areas of historic fill covering more than approximately 5 acmes. For the purposes of these maps, historic fill is non-indigenous material placed on a site in order to raise the topographic elevation of the site. No representation is made as to the composition of the fill or presence of contamination in the fill. Some areas mapped as fill may contain chemical-production waste or ore-processing waste that exclude them from the legislative definition of historic fill.

Fill was mapped from stereo aerial photography taken in March 1979, supplemented in places by planimetric aerial photography taken in the spring of 1991 and 1992. Additional .areas of fill were mapped by comparing areas of swamp, marsh, and floodplain shown on archival topographic and geologic maps on file at the N. J. Geological Surrey, dated betAreen 1840 and 1910, to their modern extent. In a few places, fill was mapped from field observations and from drillers' logs of wells and. borings.

Most urban and suburban areas are underlain by a discontinuous layer of excavated indigenous soil mixed with varying amounts of non-indigenous material. This material generally does not meet the definition of historic fill and is riot depicted on these maps. Also, there maybe historic fills that are riot detectable on aerial photography or by archival map interpretation and so are not shown on these maps, particularly along stre.arns in urban and suburban areas.

Use of the maps related to the Technical Rules, N.J.A. C. 7:26E. These maps are provided for informational pin-poses only. The use of these maps as the only source of information regarding the presence of historic fill at a site does not fulfill the diligent inquiry requirements of the Preliminary Assessment set forth at, N.J.A.C. 7:26E-3.1(c). These maps may be used as one source of information to fulfill the requirements of the Site Investigation at, N.J.A.C. 7:26E-3.12. **These maps are not intended to fulfill the Remedial Investigation requirements associated with historic fill at., N.J.A. C. 7 :26E-4.6(b).**

At this time 121 USGS 7.5 minute quadrangles have been ma.pped for historic fill, mostly in urbanized and shoreline areas. These 121 maps were digitized to ESRI coverages. As of Febmaiy 2009 the Plainfield quadrangle

Zip file (GIS) and pdf formats available

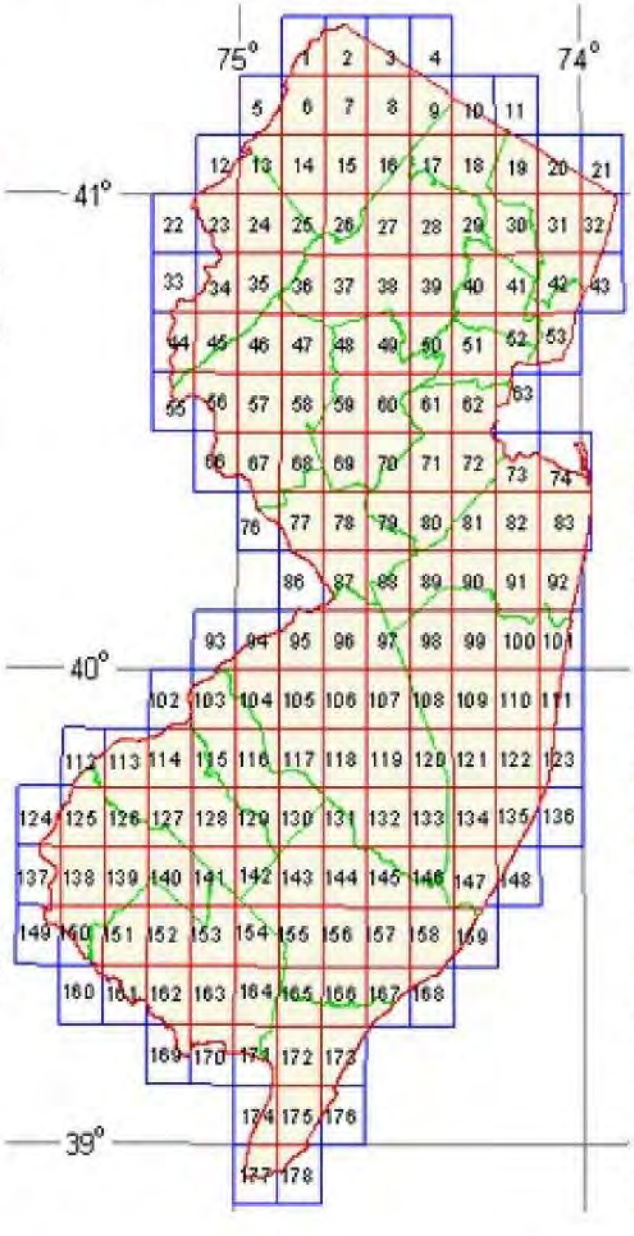
New Jersey 7-1/2' Quadrangle Index Map Showing County Boundaries

Download a historic fill quadrangle coverage/shapefile, statewide coverage/shapefile or PDF maps by clicking a file link below.

New Jersey 7-1/2' Quadrangle Index List

SAMPLE IMAGE

1. Milford(PA).zip (6KB), PDF (2MB)
2. Port Jervis South(NY).zip (13KB), PDF (3MB)
3. Unionville(NY).zip (13KB), PDF (1MB)
4. Pine Island(NY)-Wawayanda.zip (30KB), PDF (1MB)
5. Lake Mazkenozha(PA).zip (16KB), PDF (2MB)
6. Culvers Gap.zip (17KB), PDF (3MB)
7. Branchville.zip (14KB), PDF (4MB)
8. Hamburg.zip (51KB), PDF (4MB)
9. Wawayanda.zip (30KB), PDF (4MB)
10. Greenwood Lake(NY)-Sloatsburg(NY).zip (20KB), PDF (2MB)
11. Sloatsburg(NY)-Greenwood Lake(NY).zip (20KB), PDF (2MB)
12. Bushkill(PA).zip (20KB), PDF (2MB)
13. Flatbrookville.zip (23KB), PDF (4MB)
14. Newton West.zip (39KB), PDF (5MB)
15. Newton East.zip (18KB), PDF (4MB)
16. Franklin.zip (56KB), PDF (4MB)
17. Newfoundland.zip (52KB), PDF (4MB)
18. Wanaque.zip (18KB), PDF (4MB)
19. Ramsey.zip (67KB), PDF (4MB)
20. Park Ridge.zip (45KB), PDF (2MB)



New Jersey 7-1/2' Quadrangle Index List

SAMPLE IMAGE

90. Adelphia.zip (65KB), PDF (5MB)
91. Farmingdale.zip (84KB), PDF (4MB)
92. Asbury Park.zip (69KB), PDF (5MB)
93. Frankford-Beverly(PA).zip (71KB), PDF (5MB)
94. Beverly-Frankford(PA).zip (71KB), PDF (5MB)
95. Bristol(PA).zip (103KB), PDF (3MB)
96. Columbus-Not Available
97. New Egypt-Not Available
98. Cassville-Not Available
99. Lakehurst-Not Available
100. Lakewood-Not Available
101. Point Pleasant.zip (90KB), PDF (3MB)
102. Philadelphia(PA).zip (18KB), PDF (1MB)
103. Camden.zip (144MB) PDF (4MB)
104. Moorestown.zip (75KB), PDF (3MB)
105. Mt. Holly-Not Available
106. Pemberton-Not Available
107. Brownsmills-Not Available
108. Whiting-Not Available
109. Keswick Grove-Not Available
110. Toms River.zip (120KB), PDF (5MB)

Jersey City Historic Fill Quadrangle
(partial)

Preliminary Assessment

- LSRPs are exempted from calling the DEP Hotline when historic fill material is identified (N.J.S.A. 58:10C-16k)
- Historic fill material is listed as an area of concern in the Technical Rules
- Remediation of historic fill material is required pursuant to the Technical Rules
  - Remediation is initiated with the submission of a Confirmed Discharge Notification form to DEP

Site Investigation

- All other AOCs must be **identified and investigated independently** of historic fill material
- Other AOCs are often identified
  - During the PA/SI from a diligent inquiry of site history and origin historic fill material
  - By elevated PID/FID readings (5 X background)
  - Detection of any free and/or residual product
- Remediation of all other AOCs must be conducted pursuant to the Technical Rules

Site Investigation

Conduct a subsurface investigation to evaluate the nature and general extent of historic fill material

- Test pits, trenches or borings to a depth of two feet below the fill material to determine extent
  - Screen using field instruments (PID/FID)
  - Log results to document subsurface conditions including fill characteristics
- Document the depth to ground water and contamination if encountered
- Photo-documentation of historic fill material and subsurface stratigraphy is encouraged

Site Investigation – After Historic Fill Material is Identified

The investigator may either:

- **Assume** that the fill material is contaminated (exceeds the residential soil remediation standards), **and**
- Conduct a remedial investigation (N.J.A.C. 7:26E-4.6(b))

or

- **Collect samples** to document that the fill is clean (does not exceed the residential soil remediation standards)

Site Investigation – Sampling to Determine The Fill Is Clean

- Select 2 sample locations per acre of historic fill material at a minimum (regardless of site size)
- If the material is homogeneous
  - Collect 1 discrete sample, per sample location, from a 6 inch interval in the historic fill material
- If the fill has defined strata (or layers of different fill material)
  - Collect 1 discrete sample from a 6 inch interval from each stratum in the historic fill material
  - Not recommending sampling from each strata in each subsurface sample*

***Note guidance differs from current Technical Rules**

Site Investigation – Sampling to Determine The Fill Is Clean*

Analyze soil samples for

- PAHs – from the EPA Target Compound List (TCL)
- Metals – using the EPA Target Analyte List (TAL)
- Complete TCL/TAL analysis and EPH on 25% of samples (min of 1 sample, per stratum/fill type, per site)
- Use the DEP "Protocol for Addressing Extractable Petroleum Hydrocarbons"
  - Evaluate the results using **EPH Category 2**

***Note guidance differs from current Technical Rules**

Site Investigation – Sampling to Determine The Fill Is Clean

- No further investigation of the historic fill material is required when
  - Analytical results confirm that historic fill material does not exceed DEP residential soil remediation standards
  - Evaluation of the impact to ground water soil remediation standards is not required

or

- Conduct a remedial investigation when
  - Analytical results confirm contamination exceeding residential soil remediation standards

Remedial Investigation

PA identified historic fill through one or more of the following:

- Review of aerial photographs
- Historic fill maps
- Interviews with knowledgeable persons
- Historical sampling data
- Historical subsurface observations
- Information from neighboring properties

Developing Remedial Investigation

Items to Consider

- Lines of Evidence
- Are other AOCs present on site?
- Future Site Use
- Access
- Is historic fill site-wide or area-specific?

Site Wide Historic Fill - RI

- Determine horizontal and vertical extent on site for each fill type
- Delineation beyond the property boundary is not required
- Delineate site-specific AOCs independently
  - If contaminants of concern are the same, collect sufficient samples to determine concentration gradient
- Collect analytical data if not assuming that the fill is contaminated

Area Specific Historic Fill - RI

- Confirm the historic fill material is not a result of site-operations (e.g., process waste)
- If historic fill is **not site wide** it must be treated as a **separate AOC**
  - Fully delineate the horizontal and vertical extent
  - Confirm non-fill soil outside the extent of historic fill
  - Select analytical parameters if not using assuming the fill is contaminated based on the SI, or
  - Use the parameter list in the SI section of the guidance

Additional Considerations - RI

- Professional judgment may be used to deviate from Guidance
- Min of 4 borings/test pits/trenches per acre of historic fill
- Reduced frequency may be used for larger sites
- No fewer than 4 locations should be evaluated (regardless of size)
- The presence of ground water should be noted
- Determine if ground water is located within 2 feet of the base of the historic fill

Remedial Action - Requirements

If historic fill is assumed/confirmed to be contaminated above the applicable soil remediation standards

- Engineering and institutional controls are required
  - –Existing site improvements may be used as a cap (if appropriate)
- Soil remediation permit is required
- Biennial certifications are required
- Remediation funding source (RFS) is required

Remedial Action - Requirements

For a non-residential site - contamination between residential and non-residential SRS

- Deed Notice is required (engineering control is not required)
- Soil Remediation Permit is required
- Biennial certifications are required
- Remediation funding source is not required.

Diffuse Anthropogenic Pollution - DAP

Generally DAP is identified during the RI based on lines of evidence

- SI analytical data not matching site related operations or historic fill
- AOC specific RI data indicates concentration gradients not indicative of a point source discharge
- Industrial history of site/region

Remedial Investigation - DAP

To evaluate for DAP in soil

- Rule out historic fill
- Collect sufficient soil samples to establish concentration gradients and to delineate any AOC specific discharges
- Off-site delineation of DAP is not required
- Ground water sampling related to DAP should be a site-specific decision and based on professional judgment

Remedial Action - DAP

- Similar to Historic Fill
- Remedial strategies must be based on current and future site use
- A cap may be appropriate based on concentration of contamination and exposure pathways
- Existing site improvements may be used as a cap (if appropriate)
- Soil remediation permit is required
- Biennial certifications are required
- RFS will be required if engineering controls are used

Ground Water Requirements for Historic Fill Material

Site Investigation

- If fill material is not within 2 feet of the seasonal high water table - no further investigation

- If fill material is within 2 feet of the seasonal high water table

  – Assume the ground water is contaminated and conduct the RI

or

  – Sample to demonstrate ground water is below the applicable ground water remediation standards

Ground Water Requirements for Historic Fill Material

Remedial Investigation

- If fill material is within 2 feet of the seasonal high water table
- The remediating party/LSRP must collect a sample
  - The sample must analyzed using USEPA TCL/TAL
  - Low flow sampling is recommended
  - Collect the sample within the fill area (if not possible, within 10 feet of fill area)

Ground Water Requirements for Historic Fill Material

If sampling confirms contamination

- In areas of regional historic fill material
  - Establish a Classification Exception Area (CEA) for the ground water contamination associated with the fill
  - This option is only available when no other ground water contamination is identified
- When the historic fill material is contained within the property boundary
  - Conduct an RI similar to any other AOC

Ground Water Requirements for Historic Fill Material

Establishing a CEA in areas of regional historic fill material

- Extent of the CEA – Based on property boundary
- Duration of the CEA – Is "indeterminate"
- Contaminants – List all contaminants above the applicable ground water remediation standards
- Submit the CEA Fact Sheet form and applicable attachments with the RI Report for the site

Ground Water Requirements for Historic Fill Material

Once the CEA is established

- A biennial certification is not required - It's the Department's responsibility as a regional issue
- A remedial action permit for ground water is not required

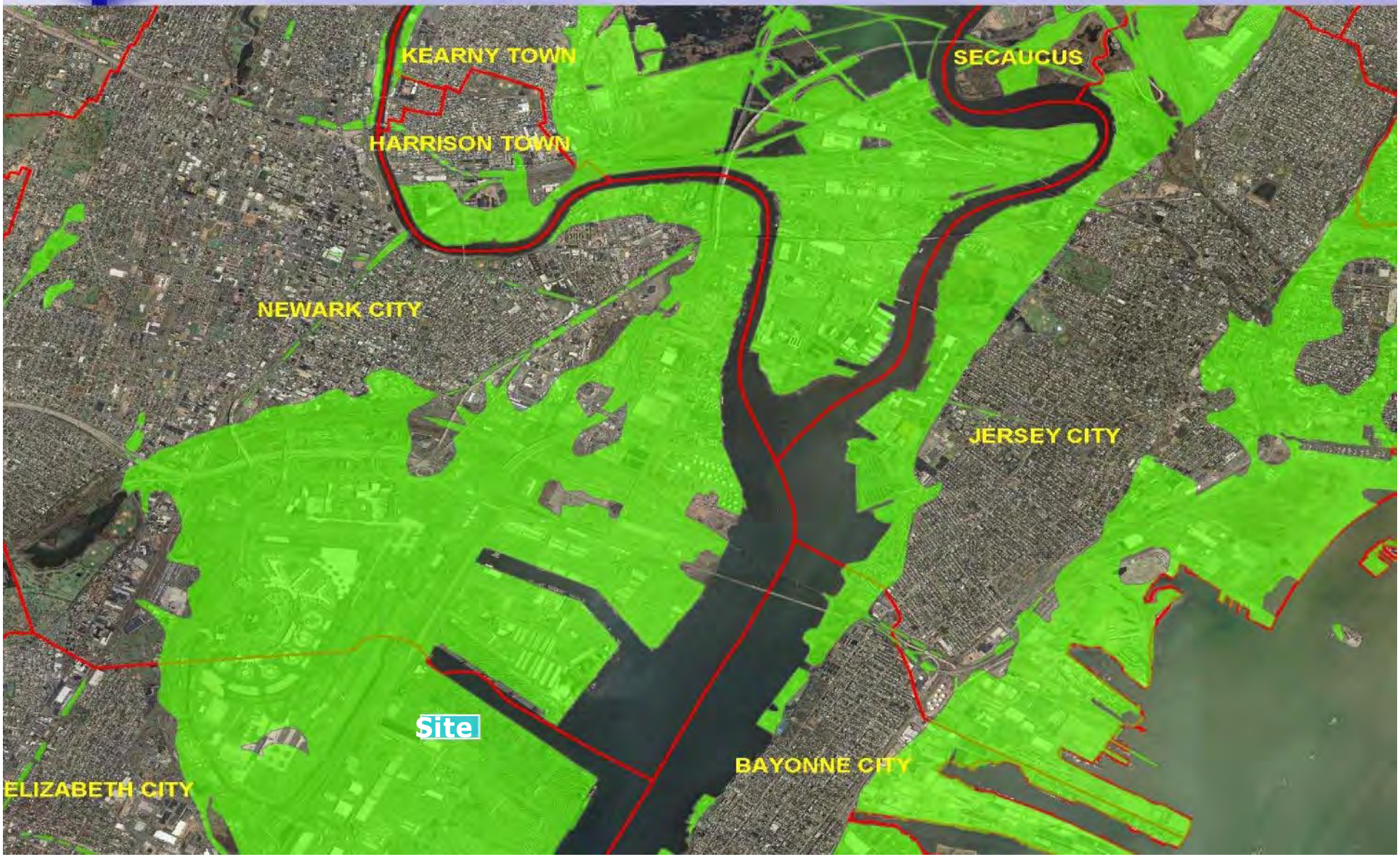
Historic Fill Material General Case Studies

I. Site within regional mapped historic fill material

I. Site partially within regional mapped historic fill material

I. Historic fill material located within site/property boundary

I. Site within regional mapped historic fill material



I. Site within regional mapped historic fill material

PA – Lines of evidence indicate entire site within area mapped as historic fill material

SI – Install test pits/trenches/borings within the suspected extent

- Document depth to ground water (if encountered, evaluate for contamination)
- Assume historic fill material and ground water are contaminated and proceed to RI

or

- Conduct sampling

I. Site within regional mapped historic fill material

RI – Characterize nature and delineate general extent of fill (4 borings/acre or professional discretion)

- Perimeter sampling not required
- Analytical sampling not required
- Sample ground water if fill is within 2’ of water table (if not done in SI)

RA – Provide results and/or describe nature and extent of fill in Deed Notice

- Soil remediation permit
- Install engineering controls
- Establish CEA
- Establish remediation funding source

II. Site partially within regional mapped historic fill material

II. Site partially within regional mapped historic fill material

PA/SI – Similar to entire site mapped within historic fill material

RI – Delineation required including establishing perimeter and extent of fill within the site.

– Sample ground water if fill within 2’ of water table (if not done during SI)

RA – Provide results and/or describe nature and extent of fill in Deed Notice

–Soil remediation permit

–Install engineering controls

–Establish CEA

–Establish remediation funding source

Note - the delineation can be used to reduce the extent of an engineering control and the amount of the remediation funding source.

III. Historic fill material mapped within site/property boundary

III. Historic fill material mapped within site/property boundary

PA – Lines of evidence indicate probable fill contained within the site.

SI – Confirm/refute presence of fill. Investigate fill as an AOC in RI.

RI – Install at least four borings, test pits or trenches per acre with a minimum of 4 locations per site, regardless of size.

– Establish horizontal extent of fill by installing a minimum of four borings /test pits/trenches in non-fill areas.

continued

III. Historic Fill Material mapped within site/property boundary

RI – If ground water sampling is required, conduct a remedial investigation of the ground water pursuant to the Tech Rules N.J.A.C. 7:26E-4.4.

RA – Provide results and/or describe nature and extent of fill in Deed Notice

- Soil remediation permit
- Install engineering controls
- Establish CEA
- Establish remediation funding source

CLEAN FILL/ALTERNATIVE FILL

IN-DEPTH

Alternative and Clean Fill Guidance for Site Remediation Program Sites

Teruo (Terry) Sugihara

Presentation Outline

- History, Transition, Goals, and Main Principles
- Alternative Fill
- Clean Fill
- Compliance and Case Examples
- Questions

Fill Guidance: History

- Problematic uses of contaminated fill
- June 2008 Guidance
- Stakeholder process initiated June 2010
- New guidance finalized August 2011

Fill Guidance: Goals

- For SRP sites only
- Avoid "de facto landfilling"
- Provide alternatives to clean fill
- Clean fill

Fill Guidance: Overarching Principles

Don't make it worse

- **Like-on-like** – Limit types of contamination
- **75th percentile** – Limit the concentration of contamination to be used as fill
- **Volume limit** – Quantities of fill are limited to the amount needed to complete the remediation

Fill Guidance: Main Principles

- Guidance provides information on how to "do it right"
- Allows flexibility through the use of professional judgment
- With the use of professional judgment comes responsibilities

Alternative Fill

Kathleen Kunze

Alternative Fill

Definition - material to be used in a remedial action that

- Contains contaminants in excess of the most stringent soil remediation standards
- Contains contaminants in excess of criteria or action levels for contaminants without standards, such as asbestos, radiation, hexavalent chromium and dioxins
- Does not contain free liquid or product
- Can be "soil" or "non-soil"

Alternative Fill

Purpose

- To provide guidance on the use of alternative fill at SRP site Areas of Concern
- To provide details on sampling frequencies and compliance with the proposed rule requirements (like-on-like/ 75th percentile)

Alternative Fill Requirements for

Off-site donors

On-site donors

Alternative Fill

Receiving Site AOC Data

- Evaluate RI data for each receiving AOC to determine contaminants of concern and their concentrations
- Organize list of contaminants for like-on-like evaluation and compliance calculation
  - –May group PAHs with same health-based criteria
  - –May not include non-carcinogenic PAHs since they have different health endpoints
- Determine the 75th percentile value for each contaminant
  - –Other compliance options acceptable with variance

Alternative fill

Characterize the donor site

- Must have a thorough understanding of the donor site as to uniformity as well as contaminant types and concentrations
- Conduct a site review to determine sampling needs and data gaps for fill material
- Use existing data and/or collect new discrete data as per Table 1 sampling frequencies

Alternative Fill

Existing data may be used when

- A NJ certified lab performed the analyses
- Thedata meet data quality requirements (QA/QC)
- Acceptable sample collection methods were used
- Alternative fill was not moved to another property after sampling was conducted

Alternative Fill

Existing Composite Data

- May be used if reliable and representative
- May not be used for VOC characterization
- May be used to reduce discrete sampling required in Table 1

Note: Use of composite data is a variance requiring justification

Alternative Fill

Obtaining New Data for Donor Site

- Design sampling strategy and frequency based on site review and Table 1. Can modify frequencies based on level of knowledge of the donor source

- Analyses - TCL/TAL
  - Analytes may be added or deleted based on site review or existing data

Alternative Fill

Donor Site Data Evaluation

- Organize all usable data on spreadsheet

  -Compare COCs to comply with like-on-like requirement (with PAH exception)

  -Compare maximum values of each COC to 75th percentile value at receiving site AOC

Alternative Fill

Impact to Ground Water (IGW) Evaluation

- If donor material ≤IGW default soil screening levels or site specific IGW soil screening levels, can use as alternative fill
- If >IGW default soil screening levels, run SPLP test as per IGW guidance
  - Pass SPLP, can use as alternative fill
    - Fail SPLP, cannot use as alternative fill unless fill won't impact groundwater remedy or adjacent surface water

NOTE: Default IGW screening levels for metals with secondary GWQS do not apply

Requirements for Other Alternative Fill Materials:

- **Sediments**
  - Includes dredge material (DM) and processed dredge material (PDM)
  - Additives are a concern for PDM
  - Can use Office of Dredging and Sediment Technology data but need an Acceptable Use Determination (AUD)
- **Historic fill**
  - Non-soil material requires Certificate of Authority to Operate/Beneficial Use Determination (CAO/BUD) from Solid Waste.
  - Evaluate data per section 4.5 of this guidance
  - Follow IGW guidance

Additional Materials to be Considered for Off-site Alternative Fill Material:

- **Recycled concrete**
  - Use this guidance and the Department's Recycled Concrete Guidance
  - Need CAO/BUD from NJDEP Division of Solid Waste
  - If IGW concerns, follow section 4.6 of this guidance

Restrictions/Exclusions

- PCB restriction
- Asbestos exclusion
- RCRA waste exclusion
- Dioxin exclusion
- Radiological material exclusion

Alternative Fill from On-site Donors

- AOC data evaluation
  - Consolidation encouraged if not increasing gw contamination or mixing incompatible contaminants
- Exceptions to 75th and like-on-like (variance)
  - Only if increasing clean AOCs
- IGW considerations
- Historic fill at Brownfield sites across property lines
  - If no increase in gw contamination
  - If protective
- All other restrictions/exclusions apply

Clean Fill

David Barskey

Clean Fill

Current Technical Rule and Guidance

- Tech Rule N.J.A.C. 7:26E-6.4(b)2 and 3
- Fill must be uncontaminated
  - No contamination over any applicable remediation standard
  - Must be free of extraneous debris or solid waste
- Quality of fill must be documented with a certification and a description of the steps taken to confirm fill is clean
- Previously no guidance on clean fill

Clean Fill

New Guidance

- Provides the details on how to determine fill is clean leading to appropriate and consistent decisions
- Provides a formal definition of Clean Fill consistent with current Tech Rule
- Provides the details on how to comply with current and proposed rule requirements

Clean Fill

Applicability of guidance

- For fill from on-site and off-site sources
- Off-site sources can be from in-state and out-of-state
- Guidance applies to SRP sites only
- Can use professional judgment to deviate from guidance, include justification in RAW and/or RAR

Clean Fill

Definition in guidance

- Meets all soil standards, including impact to ground water
- Meets all soil criteria or action levels
- Has no debris, solid waste, or free liquids
- Can be soil or nonsoil - also defined in guidance

Clean Fill

Donor Site Review and Data Assessment

- Must have a thorough understanding of donor site
  - Historical and current use
  - The types and concentrations of natural or man-made hazardous substances at the site
- Conduct a site review
  - Similar to a Preliminary Assessment
- Assess analytical data
  - Existing data from the site review and/or
  - New data from this technical guidance

Clean Fill

Existing data may be used when

- NJ certified lab performed the analyses
- Data meets data quality requirements (QA/QC)
- Acceptable sample collection methods were used
- Clean fill was not moved to another property after sampling was conducted

Clean Fill

Existing composite sample data

- Existing composite sample data may be used when the data are reliable and representative
- Use of composite sample data is a deviation from the guidance requiring justification
- If composite sample data are used, support with additional discrete sample data

Clean Fill

New data using this technical guidance

- Develop a sampling strategy and frequency
  - Base it on the site review and existing reliable data
  - Use Table 2 to establish sampling frequency, to be discussed in more detail later in the training

Clean Fill

New data using this technical guidance (continued)

- Select the analyses needed
  - Target Compound List (TCL) organics and Target Analyte List (TAL) inorganics
  - Can modify analyses needed based on site review and existing data
  - Other analyses may be needed to ensure geophysical compatibility or to assess other potential contaminants, such as dioxins or hexavalent chromium

Clean Fill

Testing of Fines and Sand from Quarries

- Data is needed to show that the material is clean
- One sample per year from a commercial quarry/source is acceptable
- May use existing data from the source operator
- Analyze additional samples from other sources, based on the donor site review and initial data results

Clean Fill

Natural background

- Do not use material with natural concentrations that exceed standards or criteria
- Screen for radiation above natural background levels when natural sources of radioactivity may exist at the donor site
- Exception - When receiving AOC and donor material are the same natural geologic material and have the same background levels (Most likely when donor material is from an on-site source)

Clean Fill

Evaluate potential impacts to ground water (IGW)

- If donor material ≤default IGW soil screening levels no further evaluation is needed - can use as clean fill
- If >default IGW soil screening levels, run the Synthetic Precipitation Leaching Procedure (SPLP) test
  - Select samples per IGW guidance – highest contaminant levels, etc.
  - If samples "Pass SPLP" - can use as clean fill
  - If samples "Fail SPLP" - cannot use as clean fill
- Default IGW SSLs do not apply to metals with secondary ground water quality criteria, such as aluminum or manganese, unless they are from a discharge

Clean Fill

Exclusions - Can not use donor material that

- Contains asbestos
  - Either naturally occurring, or Asbestos containing material (ACM). Note: ACM with <1% asbestos is not a reliable indicator of clean material
- Is RCRA hazardous
  - Conduct RCRA tests if there is any question that the donor material not nonhazardous
- Has dioxins/furans > the standards or criteria

Clean Fill

Recycled Concrete

- Use this Guidance and the Recycled Concrete Guidance
- May use data generated from Recycled Concrete Guidance, if equivalent to data from this Guidance
- Evaluate impacts to ground water using Section 6.5 of this guidance
- Requires a Certificate of Authority to Operate/Beneficial Use Determination (CAO/BUD) for beneficial reuse from the Department's Solid and Hazardous Waste Management Program

Clean Fill

Sediment

- Includes Dredged Material and Processed Dredged Material (PDM)
- Base sampling and analyses on site review and Table 2
- May be able to use data generated for the NJDEP Office of Dredging and Sediment Technology (ODST), if the data are reliable
- Evaluate PDM bench-scale data from ODST, additives may be a concern requiring further evaluation
- ODST requires the supplier to have an Acceptable Use Determination (AUD) and the receiving SRP site an approved Remedial Action Workplan

Table 2: Sampling Frequency Guide for Clean Fill

Proposed Volume	Default Sampling Scheme without justification	Reduced Sampling Scheme with justification
(Cubic Yards)	(Samples)	(Samples)
0 to 20	1	1
20.1 to 40	2	2
40.1 to 60	3	2
60.1 to 80	4	2
80.1 to 100	5	2
100.1 to 200	6	3
200.1 to 300	7	3
300.1 to 400	8	4
400.1 to 500	9	4
500.1 to 600	10	5
600.1 to 700	11	5
700.1 to 800	12	6
800.1 to 900	13	6
900.1 to 1,000	14	7
1,000.1 to 2,000	15	8
2,000.1 to 3,000	16	9
3,000.1 to 4,000	17	10
4,000.1 to 5,000	18	11
5,000.1 to 6,000	19	12
6,000.1 to 7,000	20	13
7,000.1 to 8,000	21	14
8,000.1 to 9,000	22	15
9,000.1 to 10,000	23	16
10,000.1 to 11,000 *	24	17

*With volumes greater than 10,000 cubic yards, the sampling rate is 1 per additional 1,000 cubic yards. The sampling frequency may be reduced with appropriate justification and does not require Department pre-approval. This includes deviation from the default or reduced sampling frequencies.

CLEAN FILL TESTING EXCEPTIONS

- Fines from rock (e.g., crushed rock, gravel, dense graded aggregate, or other such rock material) mined or excavated from undisturbed geologic formations requires one sample of the fines for analysis as long as the rock is obtained from a quarry/mine that has not been located on or impacted by other contaminant sources, based on a preliminary assessment or other site review. Existing data provided by the quarry/mine owner/operator is acceptable for use as long as there is at least one sample for each calendar year of quarry/mine operation, and the Investigator determines that these data are reliable. For other sources of rock from undisturbed geologic formations, at least one (1) sample of the fines must be collected and analyzed with additional samples collected and analyzed as needed based on a preliminary assessment or other site review and the laboratory results from the initial sample of the fines.
- Sand or soil mined or excavated from undisturbed geologic formations requires one sample for analysis as long as the sand or soil is obtained from a commercial source or quarry that has not been located on or impacted by other contaminant sources based on a preliminary assessment or other site review. This exception does not apply to manufactured soil, such as the mixing of composted leaves with inorganic soil, or blended soil, which is to be sampled for analysis using the sampling frequency table (Table 2) in this guidance. These data provide appropriate documentation that the fines meet the applicable remediation standards or criteria pursuant to the definition of clean fill at N.J.A.C. 7:26E-1.8. Existing data provided by the quarry/mine owner/operator is acceptable for use as long as there is at least one sample for each calendar year of quarry/mine operation, and the Investigator determines that these data are reliable. For other sources of sand from undisturbed geologic formations, at least one (1) sample of the sand or soil must be collected and analyzed with additional samples collected and analyzed as needed based on a preliminary assessment or other site review and the laboratory results from the initial sample of the sand or soil.
- If there are any potential questions or concerns that the clean fill (i.e., rock, sand, or soil) may not meet the applicable remediation standards or criteria, then sample for analysis using the sampling frequency table (Table 2) and section 6.1 in this technical guidance.

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) WASTE EXCLUSION

- Only nonhazardous clean fill may be used at a receiving AOC. Clean fill can be assumed to be nonhazardous because of its definition, so waste classification testing should not be needed. If there is any question whether a clean fill source may be hazardous, then this shall be determined pursuant to N.J.A.C. 7:26G and 40 C.F.R. 261.

RECYCLED CONCRETE

- Use of concrete is subject to this technical guidance and the recycled concrete guidance established by the Department's Solid and Hazardous Waste Management Program found at: http://www.state.nj.us/dep/dshw/resource/guidance/concrete%20demo%201210.pdf. Analytical testing conducted using Sections V or VI of the recycled concrete guidance may be substituted to fulfill some or all of the sampling and analytical requirements of this technical guidance, if those results are determined to be equivalent by the investigator overseeing the remediation of the receiving AOC. Buildings or structures should be sampled prior to demolition so samples can be biased appropriately. However, because the recycled concrete guidance does not incorporate IGW considerations, IGW must be evaluated using Section 6.5 of this technical guidance. Clean concrete that meets this technical guidance and the recycled concrete guidance requires a CAO/BUD from the SHWMP, pursuant to N.J.A.C. 7:26-1.7(g) and as discussed in guidance at http://www.state.nj.us/dep/dshw/rrtp/bud.htm.unless justification is provided otherwise.

DIOXIN EXCLUSION

- Materials that contain dioxin expressed as Toxicity Equivalent Quotients (TEQs) for 2, 3, 7, 8-TCDD at concentrations above the Department's action level or remediation standard in effect at the time the donor site material is evaluated shall not be used as clean fill at a receiving AOC.

SEDIMENT

- Sediment, inclusive of dredged material and process dredged material (PDM), being considered for placement at a SRP site as clean fill is subject to the same requirements as other clean fill sources. Based on the PA or site review, if sediments are from a source not known or suspected to be contaminated, and are relatively homogeneous, then such materials are candidates for reduced sampling frequency as described in Section 6.1.2 of this technical guidance. Data for evaluation pursuant to this technical guidance may be obtained from the completion of a site investigation/remedial investigation or from the Department's Office of Dredging and Sediment Technology (ODST). Collection and analysis of additional samples may be needed to supplement any data obtained from ODST that may not meet the sampling frequencies, analyses, or discrete sampling of this technical guidance.

- A concern about processed dredged materials is that the additives used may also be a source of contamination that needs to be assessed. If bench-scale data for PDM is obtained from ODST, then the investigator should evaluate the data to determine if it is sufficient to meet the concepts of this technical guidance. If the investigator determines the bench scale data is either nonrepresentative, the sample frequency is inadequate, or the need to ensure compliance with the applicable remediation standards, then discrete samples of the actual PDM may need to be collected and analyzed. The investigator needs to be aware that the supplier (whether an on-site or off-site person or entity) of sediment as clean fill, must have an Acceptable Use Determination (AUD) from the Department's Office of Dredging and Sediment Technology (ODST). The receiving SRP site does not require an AUD, but an approved remedial action work plan for the receiving site is required by ODST. Clean fill proposed for use at a SRP site cannot impact sediment quality at the receiving AOC in a way that is inconsistent with the proposed remedial action. In other words, the proposed remedial action for the receiving AOC must address all sediment issues whether from the existing contamination or the placement of the clean fill.

FILL USE PLAN

The Fill Use Plan required in the Remedial Action Workplan (RAW) pursuant to N.J.A.C. 7:26E- 6.2(c) and 6.4(d) should include all of the following (parts can be provided in the Remedial Action Report (RAR) when not known at the time of RAW preparation, such as the information for the donor site):

1 For alternative and clean fill:

1.1 The location of the site of use and donor site(s) including state, county, municipality, address, block, and lot numbers.

1.2 The names, contact information, and relationship of all persons involved with the source, preparation, and transport of the fill from the donor site to the receiving site.

1.3 A description of the originating or donor site or AOC including use history from a PA or site review.

1.4 The volume of alternative fill or clean fill to be used or imported.

1.5 Identification of the specific location(s) on the site where the use will occur on a properly scaled map.

1.6 The depth to ground water on the receiving site, including the method of determination.

1.7 The description of the geotechnical properties of the fill appropriate for the intended use.

1.8 The use of the area(s) of the receiving and donor site (e.g., residential or nonresidential) being as specific as possible (e.g., light industrial, commercial strip mall, soccer field, condominium complex, etc.).

1.9 A discussion of the performance, effectiveness, and reliability of the proposed fill use and any potential negative impacts to human health, safety or the environment as a result of the use pursuant to the requirements at N.J.A.C. 7:26E-6.4(d).

1.10 The tracking and QC requirements to ensure all shipments received are of the fill from the approved donor site(s).

1.11 The field sampling and quality assurance project plan where new data must be generated for application of this guidance.

1.12 Documentation of the reliability of all data used in the application of this guidance.

1.13 The applicable laboratory data deliverables for all new data used in the application of this guidance.

FILL USE PLAN CONT.

1.14 All other documentation demonstrating compliance with this guidance.

2 For alternative fill only:

2.1 Data used to demonstrate that the same contaminants are present at the receiving and donor AOCs (i.e., contaminants not present at the receiving AOC may not be introduced as new contaminants in the donor fill).

2.2 Documentation to demonstrate compliance with the 75th percentile or mean criterion.

2.3 Documentation of the waste classification of the fill, including all supporting data.

2.4 Cut and fill calculations to support the volume of alternative fill is not in excess of what is required for the remedial action.

2.5 Documentation that the intended use of the alternative fill will not contaminate or increase contamination of ground water, surface water, or sediment, or result in or increase ecological risks.

2.6 All other documentation demonstrating compliance with this guidance.

3 For clean fill only:

3.1 The documentation (e.g., data deliverables) that the clean fill meets all applicable remediation standards and criteria and is free of extraneous debris or solid waste.

3.2 All other documentation demonstrating compliance with this guidance.

CONCLUSION

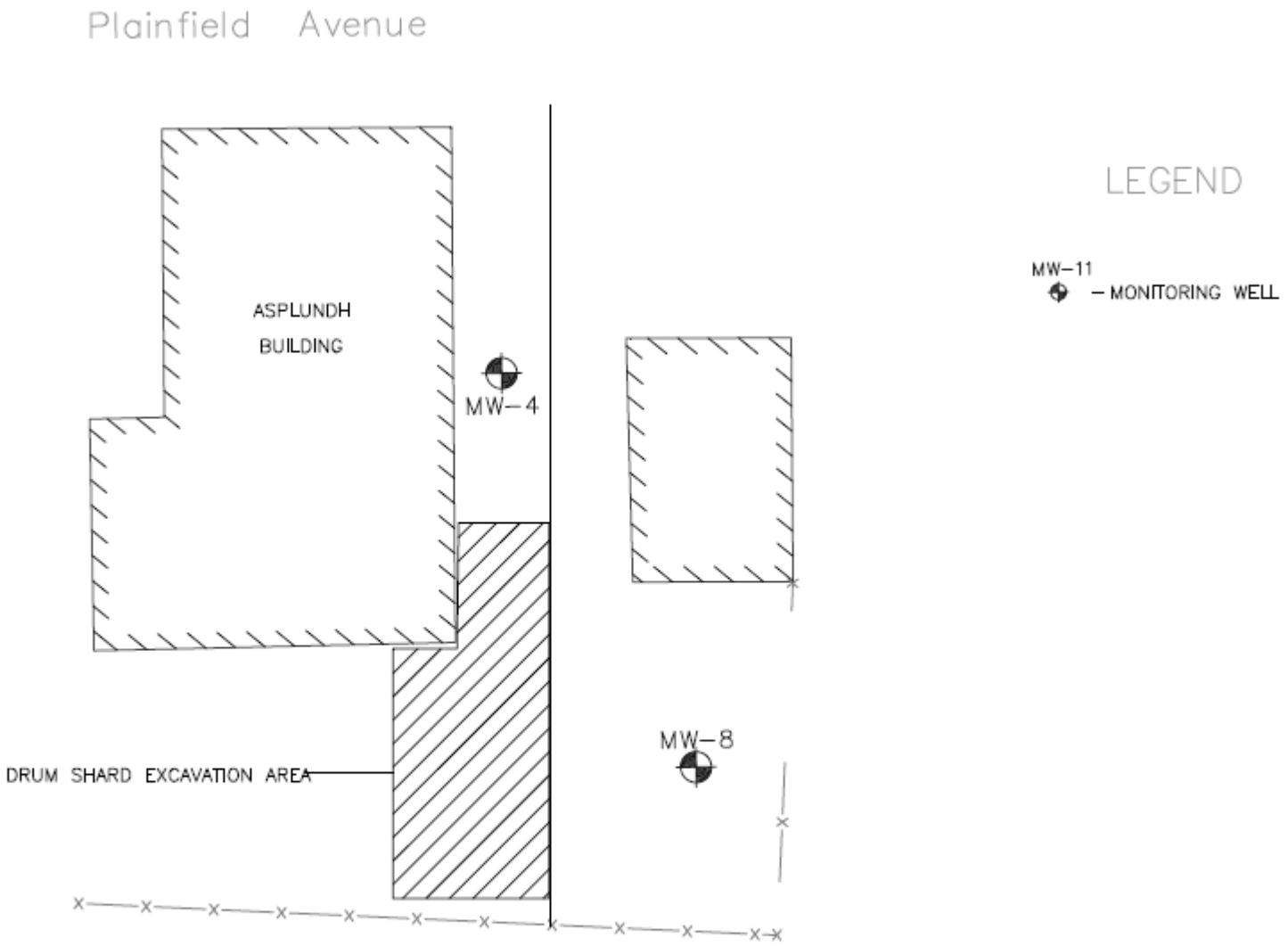
- NEW RULES – MAY 7, 2012
- LSRP SHOULD CONDUCT DUE DILIGENCE
- ADD NEW SPECIFICATIONS SECTIONS
- PREPARE MATERIALS MANAGEMENT PLAN
- WORK WITH RESPONSIBLE PARTIES

- LINEAR CONSTRUCTION OPTION > 200 CY OF IMPACTED MATERIALS
- REMEMBER HISTORIC FILL OPTIONS/LIMITATIONS
- LIMITATIONS/OTHER PROGRAMS
  - USTs
  - LANDFILLS
  - ASBESTOS
  - HAZARDOUS WASTES
  - PCBs

CASE STUDY

SCOTCH PLAINS SITE


1
© NJDEP
Legend
Environmental Data
New Jersey Parcels Data
Counties
Groundwater Contamination Areas (CEA)
Mid-Atlantic States
New Jersey
Other Mid-Atlantic States
Natural2007
Map Printed On {2012-09-10 10:12}
0
0.031mi



0 25 50

APPROX. SCALE IN FEET

DRUM SHARD EXCAVATION AREA

SCOTCH PLAINS, UNION COUNTY, NEW JERSEY

RT Environmental Services, Inc.
510 Heron Drive, Suite 306
P.O. Box 521
Bridgeport, N.J. 08014

CHARGE	AUTOCAD FILE	ENGINEER	DESIGNER	DRAFTSPERSON
80477-007	80477-007			AMM

SCALE	DRAWING NUMBER	REVISION
AS SHOWN	80477-007 APX-8 SAMPLES	

DATE: 2/14/08

Thanks!

FAQS

- GENERAL
- LINEAR CONSTRUCTION
- HISTORIC FILL

GENERAL FAQS

WHAT IS “DUE DILIGENCE”?

“Due Diligence” refers to reviewing prior knowledge and records to see if there are any environmental concerns evident at a subject property. The most commonly used environmental Due Diligence practice in the United States is the Phase I Environmental Site Assessment Guidance issued by the American Society for Testing and Materials. In NJ, an expanded scope is require – a Preliminary Assessment (per NJAC 7:26F). A Phase I Environmental Site Assessment consists of a regulatory database review, site inspection, and an interview with a “most knowledgeable person”, who has at least 10 years knowledge of the subject property. A deed search to determine current and prior ownership is included as well. The definition of “Due Diligence” in the Fill Policy should also be referred to.

WHO SHOULD PERFORM DUE DILIGENCE?

It is generally recommended that an LSRP or other person trained in NJ environmental law, regulations and guidance perform the due diligence work. The reason for this is some potential environmental problems will only be apparent to an experienced environmental professional who may recognize prior uses, management practices or historical ownership names which may require further investigation.

IS TESTING REQUIRED?

Although soil testing is not always required under by NJDEP, most qualified environmental firms will recommend testing because soils and non-native fill, particularly those in urban areas, can be impacted by historic atmospheric emissions from coal burning, or, in many instances, clear information on the historical uses of property cannot always be accurately determined through due diligence processes. The reason for this is that discharges of hazardous substances only started to be reported in the 1970s. “Screening testing”, is typically recommended as to check to see that material qualify as CLEAN FILL. In developed areas only about 60% of materials, when tested, clearly qualify as CLEAN FILL. Because 40% of the materials do not tend to qualify as CLEAN FILL, it is important to test before moving the material.

WHAT SHOULD BE TESTED FOR?

DEP's default testing parameters are for TAL Parameters and TCL Parameters, total chromium and EPH, and Ph. Depending on initial test results, further analysis may need to be run. For screening testing, usually a minimum of 4 or 10% of the volume of samples otherwise sampled based on overall AOC impacted soil media volume are run.

WHO SHOULD IDENTIFY THE CONTAMINATED MATERIAL?

To avoid project disruptions, owners contracting for excavation or site work should conduct appropriate due diligence and testing in advance of contracting, using qualified environmental managers and consultants or LSRPs. DEP calls this Project Planning. In this manner, there are fewer surprises, during the excavation and material movement process. In any case, appropriate work must be done, before materials are excavated and moved across property lines. In the case of finding actual waste materials, appropriate testing work must be completed promptly upon finding such materials, and waste should never be re-disposed of onsite, as there are major civil and criminal penalties for illegal disposal of waste or creating an illegal unpermitted landfill, or, creating a new “discharge.”

WHO SHOULD BE THE WASTE GENERATOR IF THE MATERIAL MUST BE MANAGED AS WASTE?

State and federal environmental law is usually applied such that the person who contracted for the work, has to act as the generator of any waste material to be hauled from a site. Earthwork and highway construction contractors generally should not act as waste generators, unless they have appropriate contracts in-place, and also have appropriate environmental insurance. To avoid future liability associated with disposal sites, it is recommended that engineers contractors hold owners responsible for acting as waste generators, and accept all liabilities associated with placement of their materials in landfills, or for processing at ultimate disposal facilities.

WHAT IS ATMOSPHERIC DEPOSITION CONTAMINATION

New Jersey has a long history of coal burning, as do many urban areas. Unfortunately, coal burning produces atmospheric particulate fallout, which can impact soil with arsenic and benzo(a)pyrene. These may be present above the most stringent cleanup criteria many miles from where the coal was burned, particularly, in the case of electric generating stations, or from major powerhouses at industrial facilities. Fuel burning in motor vehicles can also add to such contamination of soils. When such contamination is present throughout an urban area, it is known as diffuse “anthropogenic” pollution.

HOW DO I MANAGE HISTORICAL FILL?

If moved offsite, historic fill must usually be managed as waste or under a Soil Reuse program. One reason for this is that historical fill may contain other waste, and has to be carefully managed and tested either before or during the process of preparing to move it offsite. HISTORICAL FILL can contain coal ash material, as when coal was burned extensively throughout the Northeast U.S., in residences, prior to World War II, municipalities typically would collect ashes from throughout the municipality, and fill in low areas along rivers, in stream flood plains or wetlands or at the end of town. If you encounter historical fill, it is important that you conduct appropriate testing, to make sure that it is only HISTORICAL FILL, and does not also contain industrial waste.

HOW DO YOU ANALYZE USED ASPHALT AND CONCRETE?

Asphalt and concrete often are considered uncontaminated and do not always require testing. In most instances, total analysis is not appropriate for analyzing asphalt, to see if it is contaminated. Instead, “leachable” analyses should be utilized. Where there is reuse of these materials and they will be moved offsite, DEP requires testing, per their guidance document (Characterization of Concrete and Clean Fill Certification Document). It is not recommended that you analyze asphalt in the laboratory for semi-volatile organics, because the semi-volatile organics are a prime component in the asphalt itself, and are not of further concern when the asphalt is hardened.

WHAT IS THE STATUS OF RECLAIMED ASPHALT PAVEMENT (RAP)/ “MILLINGS”?

RAP, also known as millings, is never considered CLEAN FILL. This is because when asphalt is milled, lead, which was present in gasoline for several generations, can leach from the milled material. The first preference is for all RAP/millings to be taken back to the asphalt plant, for remanufacture into hot mix products. As this is direct recycling, so no permits are needed.

IS USED CONCRETE CLEAN FILL?

Uncontaminated (which also means unpainted) used concrete, can be considered CLEAN FILL. If the concrete is from building demolition, other wastes including mercury switches, PCB ballasts, and other wastes have to be separated prior to demolition. If this is not done, all of the resulting crushed concrete may have to be managed as waste. If the material is to be moved offsite, see Characterization of Concrete and Clean Fill Certification Document.

WHAT IS ELEVATED "NATURAL BACKGROUND"?

Elevated "natural background" refers to situations where, for example, higher concentrations of arsenic (above the residential most stringent Sol Cleanup Criteria) are present due to natural conditions, and not resulting from any spill or release or human or industrial impact. In some parts of NJ, arsenic has been measured well above the residential Statewide Health Standard of 19 mg/kg. Where this is natural, it has generally been found to not be "bioavailable" or "leachable", meaning even if contacted, or ingested, or subject to rainwater infiltration, the arsenic is bound up in the soil, and does not present a threat to groundwater or present a health hazard. LSRPs can evaluate if arsenic or other contaminants are a "background" condition.

CAN I MIX SOIL TO MEET DEP LIMITS?

It is not permissible to mix soil at a construction site to meet DEP soil cleanup criteria unless a Remedial Action Workplan is issued by an LSRP in advance.

Mixing of soils to meet limits can be considered illegal “waste processing”, which cannot be conducted without a permit.

WHAT ABOUT OIL DRIPS?

Small, individual oil drips, only a few inches in diameter, are not considered to be of concern, and are considered to be a “de-minimis”, a minor condition not of further concern. However, if there is oil staining present near tanks, in vehicle fueling areas, or in vehicle servicing or maintenance areas, which are significant in horizontal and vertical dimension, they have to be handled as a spill/discharge, and may also have to be reported to DEP and remediated.

WHAT IF I FIND UNEXPECTED WASTE OR SUSPICIOUS MATERIALS DURING EXCAVATION?

If you find unexpected wastes, HISTORIC FILL, or other suspicious materials during excavation, contact a qualified environmental manager or consultant to assess the situation, and decide how to proceed. In many instances, quick decisions can be made to keep the project moving, particularly if the materials are localized, and other parts of the project can be worked on. It is not recommended that you move any suspicious materials from the site, until they are properly tested. In addition, any excavated materials which may be waste, should be properly protected from wind and water erosion.

FOR SMALL PROJECTS, ARE THERE MORE COST EFFECTIVE ALTERNATIVES THAN HAVING TO DO DUE DILIGENCE AND TESTING?

Landfill cover use and Brownfields Site Soil Reuse may offer more cost effective alternatives than managing material as waste. Those wishing to use this option should contact the facility to determine pricing and what testing may be required for their particular project.

CAN LAND CLEARING MATERIALS BE BURIED?

It is no longer legal to bury land clearing materials such burial can produce methane gas, causing a potential future hazard.

SELECTED
RESPONSE TO COMMENTS

LINEAR CONSTRUCTION TECHNICAL GUIDANCE

Comment Period Start: 10/20/11
Comment Period End: 12/01/11

Linear construction entities will not be required to get remedial action permits so will not be required to pay permit fees.

The Departments believes it is important that an LSRP be retained to oversee work at linear construction projects (LCPs). While the work at LCPs is not remediation by definition, these projects will need to be overseen by professionals with knowledge and experience to handle the wide range of environmental conditions that are likely to occur. With some preplanning there should be no need for these projects to be interrupted.

The Department did not feel it was warranted to detail the pre-project work in the guidance document. Discussions amongst the members of the guidance committee confirmed that the entities conducting this work are experienced and capable of conducting the pre-project work. Therefore, the pre-project guidance was intentionally general.

Any remediation, including one conducted as part of a LCP, that is conducted pursuant to the Technical Rules (and any other applicable rules), will be acceptable to the Department.

The Department agrees that the person conducting an LCP should provide environmental data to the owner of the property. Before the LCP is completed tt is essential that when contamination is encountered that the LCE either conduct the remediation or allow the responsible party access in order for them to conduct the remediation.

When the Department suggests that a small LCP follow the guidance it means that the best management practices for the handling, reuse and disposal be consistent with the Department rules and guidance. The Department is not recommending that a small LCP submit forms or reports to the Department. It is assumed that LCPs will keep their records and reports on file as a normal course of business.

The Department agrees with the commenter and has modified its policy on applying technical guidance. See http://www.nj.gov/dep/srp/srra/training/matrix/important_messages/variance_and_bpj.pdf

The Department to use 200 cubic yards as a threshold rather than attempt to name types of work or types of projects that would be required to follow the ARRCS rules Sub 16 and the linear construction guidance. Each entity that is doing linear construction work will determine for themselves if any given project will exceed the threshold.

When the Department states that projects that are not going to exceed the 200 cubic yard threshold should manage contaminated soil consistent with the Department's Solid Waste rules and guidance, including, but not limited to, SRP's Historic Fill guidance and the Alternative and clean fill guidance.

Additionally, the Guidance notes that it is intended to apply to linear projects excavating more than 200 cubic yards of contaminated soil over the duration of the project, and further notes that the Department recommends that non-responsible parties excavating less than 200 cubic yards of contaminated soil should also follow the practices provided in the Guidance. Because many of ACE's linear projects will excavate less than the threshold amount of contaminated soil, clarification would be appreciated regarding how the Department will treat such projects. In particular, a party which opts to voluntarily follow the best management practices of the Guidance for a linear project entailing less than 200 cubic yards of contaminated soil excavation should be given the opportunity to also submit an LCP Report, and receive the assurance that the project has been conducted in a manner acceptable to the Department.

The LCE will need to work with property owners to implement needed remediation. The property owners will still dictate remedies.

There are no rules for LCEs to comply with yet. The guidance will be amended after the ARRCS rules are adopted. (Future)

The only time that a linear construction entity would need to use the linear construction guidance is when contaminated properties are anticipated or found. If no contaminated properties are anticipated then this guidance would not apply. The Department is in the process of adopting basic LCP requirements into subchapter 16 of the ARRCS rules.

It is unclear from this subsection what the course of action will be if the Spill Act responsible party either cannot be identified or refuses to take responsibility for cleanup.

The Department will contact the responsible party. The Department does not anticipate that the linear construction project would need to hold up the project schedule. The linear construction entity should make reasonable allowances to give responsible parties access to contaminated areas for the purposes of remediation.

The Department's position is that highway and rail line projects should approach these projects in the same manner as other linear construction entities, and recommends that the commenter discuss their responsibility with their legal representative.

The Guidance indicates that, if it is followed, the PCLCP is not required to delineate or remediate contamination "outside the limit of the excavation area within the linear construction corridor." This wording is one of several instances in the
Guidance which points to the need for the Guidance to give further consideration to coordination between the PCLCP and an RP (e.g., a property owner) that is remediating the overall site of which the LCP is a portion, and also to more specifically define the area in which LCP delineation and remediation activities should take place.

The person conducting an LCP must use their judgment during planning, design and implementation to account to the nature and extent of contamination and to what extent that they will allow a responsible party access to remaining contaminated areas after their construction has been completed. The Department agrees that the person conducting the LCP and the responsible party will need to come to agreement regarding coordination of remediation and project construction. However, the Department does not believe that the guidance needs more clarification on this issue and will not be participating in such negotiations.

As proposed in the draft guidance document “linear construction project" means construction and development to create, maintain, alter a roadway, railroad or utility by a person conducting a linear construction project that: 1. Includes more than one property, that has contamination above a remediation standard; and 2. Will generate more than 200 cubic yards of contaminated soil for fill or disposal during the duration of the linear construction project. The definition should be modified.

The definition includes the words “maintain” and “alter” which intentionally would include work such as maintenance and replacement and upgrading of existing infrastructure.

The Department disagrees that the 200 cubic yard limit be removed from the definition. The guidance includes the recommendation that “smaller” projects (those generating less than 200 cubic yards of material) not be required to contact and file reports with the Department. It is our understanding that there are hundreds of small repair jobs going on throughout the State at any one time. Because these jobs are small in scale the Department does not think that they should be required to notify and file reports with the Department.

As to the volumetric part of the definition of LCP, 200 cubic yards seemed a reasonable cut off between large and small projects. It anticipated that entities will be able to estimate this volume limit by using the waste characterization or other sampling information along with commonly used project management calculations. Notification to the Department would only be required after the entity is fairly sure of the amount of contaminated fill that will be involved in the project.

In most cases, a utility, as the constructing party, encounters contaminated media within rights-of-way for which it is not the responsible party. Based on the guidance, the constructing party, already burdened with the cost and responsibility of waste management, is then also subject to payment of fees, notification requirements and reporting requirements related to contamination it did not cause. A constructing party, if not the responsible party, should not be required to bear these additional responsibilities the cost of which eventually gets passed on to the ratepayer or taxpayer.

The Department would prefer that the person that caused the discharge be the one that remediates the resulting contamination, however sometimes that is not possible. The goal of linear construction guidance is to make sure that contaminated material that is encountered during these projects is dealt with in a way that will be protective of human health and the environment. The Department believes that the use of this guidance will benefit constructing parties by providing a clear and consistent approach to managing contaminated soil and ground water when a responsible party is not willing or able to do the work that is needed within the time frame that the construction is being conducted.

Does the right-of-way constitute a property?

The document assumes the common English meaning of property (i.e., land). The Department intentionally did not bring in the concept of right-of-way and does not think it is necessary to do so.

The 200 cy volume refers to the total amount of soil being excavated, whether it will be backfilled, reused or disposed.

The Department agrees that linear construction entities allow responsible parties access to contaminated areas in order to conduct remediation. Responsible parties are required to comply with new regulatory and mandatory time frames that will effectively move these cleanups forward in a timely manner.

The Department intentionally did not dictate how due diligence should be conducted for these projects. Discussions amongst the members of the guidance committee confirmed that the entities conducting this work are experienced and capable of conducting the pre-project work. Therefore, the pre-project guidance was intentionally general.

The Department believes that during the design and planning of these projects that LCEs can reasonably estimate the amount of contaminated soil that will be generated. If the LCE underestimates the amount of soil, when, during the execution of the project, it is determines that greater than 200 cubic yards of soil is being generated the LCE can submit the notification form to the Department with 45 days after that determination.

The Department is proposing a minimal fee that will cover its inspection and review costs associated with these projects. Responsible parties will pay fees as established in ARRCS rules.

The Department agrees with the suggested change. The guidance will be changed accordingly.

If contamination is encountered, (unless it is an IEC condition) the property owner must be contacted and the notification made jointly by the property owner and the party doing the construction.

The guidance requires that during the construction project when contamination above a remediation standard is discovered that is not already known to the Department, the constructing party should immediately notify the Department via the DEP hotline. How often will the Department to update their online databases?

After the Department evaluates each hotline call and determines that a new case should be established, the case data is put into its tracking system. This information is “live” and available to the public via data miner.

The property owners should first be notified that contamination was encountered, informed that the hotline will be notified and then make the notification.

The Department agrees with the commenter.

Any LSRP that becomes aware of an IEC condition is responsible for notifying the Department’s hotline.

The ability for a person conducting an LCP to report the name of the person that is responsible for the contamination that is encountered is limited to the extent that they know this information. In the case were the information is not known, the person conducting an LCP should report the source of the contamination is “unknown”.

The procedures for due diligence are generally followed including a search of the Department’s Data Miner system should identify sites and USTs of which the Department is aware.

The Department will contact the responsible party. The Department does not anticipate that the linear construction project would need to hold up the project schedule. The linear construction entity should make reasonable allowances to give responsible parties access to contaminated areas for the purposes of remediation.

Generally the planning activities for these projects are long enough to allow for the notice to be submitted 45 days before the start date. If that time frame is not reasonable for a given project, submit the notification some time prior to the start of the project with an explanation of the time constraints.

The Department assumes that the person conducting the LCP will need to be in contact with the each affected property owner prior to the start of the project and is free to share any notices, forms and reports with them.

In second paragraph, 3rd bullet to revise indicate "Discovery of any regulated UST or non regulated UST exhibiting contamination issues." This would exclude residential heating USTs with no concerns and thus reduce unneeded paperwork i.e., hotline notification.

The Department disagrees. The key factor is not whether a tank is “regulated” or not – it is the fact that it is leaking. Any discharge of hazardous material requires a call to the Department’s hotline.

The Guidance should expressly identify the importance of coordinating any data gathering and due diligence with the property owner. Matters such as sampling, materials (soil and water) management, site security and access, removal of free product and buried waste, debris

The Department agrees with this comment.

This section refers to the Department's Alternative and Clean Fill Guidance for SRP Sites which is available on the web page as the LCP guidance. Reduced sampling frequencies for large quantities are available and may be used based on the Licensed Site Remediation Professional's judgment.

The Department wants to emphasize the importance of using clean fill to cap contaminated soil in order to prevent exposure. It is not the Department's intention to apply the "requirements" of the Alternative and Clean Fill Guidance to every aspect of construction projects.

The Department feels that it is important to ensure that contaminated soil is not moved to formerly clean areas thereby creating now contaminated sites. The movement of contaminated soil must be conducted in a thoughtful and responsible way. The need to follow the Department's Alternative Fill guidance when managing contaminated soil will not be removed from the guidance.

The guidance recommends that the linear construction entity remove free product when it is encountered or let the responsible party access to do so regardless of the source of the free product.

Any water discharges should be coordinated with the owner (and subject to its approval) to avoid adverse impacts on the property and any remediation responsibility of the owner.

The Department agrees with the comment.

Consider revising last paragraph to: Stockpiled contaminated material intended for offsite disposal should be removed from the site as soon as possible, ...

The Department agrees with the suggested change. The guidance will be changed accordingly.

Occasionally, excavated soils must be stockpiled in an area designated as flood zone, especially when space constrains limit the options for locating a staging pad. Typically, the excavated soils are stockpiled for a very short duration (a few days) before they are loaded out for disposal. Relief from land use permits should be provided for these limited and specific circumstances.

It is important that linear construction projects follow the Department's requirements for land use permits.

The generator of waste in this context is the person or entity that digs up contaminated soil. The Department agrees that all waste and associated documentation should be managed in accordance with applicable rules and regulations.

Six inches of clean fill will be appropriate in the majority of cases because linear construction projects usually include cement or asphalt cover and controlled access as a matter of course.

'This section indicates that, with the exception of free or residual product, contaminated backfill can be placed directly back into the excavation. This section should be modified to provide that waste/debris/containers and similar material should not be placed directly back into the excavation (much in the same way that Section 3.3.4.3 indicates that soil that contains free product or buried containers should not be reused in “other areas” of the LCP). To do otherwise would greatly complicate the future remediation of the property.

The Department assumes that professional judgment will be used when returning contamination/waste back into the excavation. The Department agrees that waste/debris/containers and similar material should not be placed directly back into the excavation or any material that would make ultimate remediation more complicated.

As noted, soil reuse within the LCP (other than directly redepositing it from where it was excavated) should be subject to the same conditions proposed in the above comments on Section 3.3.4.2, including the consent of the owner.

The Department agrees with the commenter.

If a previously unknown UST is found and removed, are the typical NJDEP "back" registration fees applicable?

The "back" registration fees are applicable to the owner or operator of the regulated UST.

The Department will not require LCEs to place deed notices within the project area. The Department believes that access to these areas will be adequately controlled by the linear construction entity and that these site rarely, if ever, will convert to another site use.

The person that assumes responsibility for the remediation that includes a remedial action permit, whether it is the person conducting the LCP or the responsible party, is required to obtain and maintain the proper permits pursuant to the ARRCS rules and the Technical Requirements.

'This section allows the PCLCP to assume, without sampling, that historic fill contains the contaminants at concentrations listed in N.J.A.C. 7:26E-4.6.

N.J.A.C. 7:26E-4.6 allows any person conducting remediation to assume that historic fill on their site is contamination and thus no analytical confirmation is needed. This section of the guidance is consistent with SRP's rules on this subject.

'Removal of free and residual product by the PCLCP should apply not only in the trench excavation but also extend into any buffer area for the reasons explained above.
The extent of delineation outside the excavation is a site-by-site determination to be made by the person conducting the linear construction project and the responsible party.

Here again, the guidance document appears to be oriented towards entities that construct within an easement on property they do not own. If NJ Transit or NJDOT condemned property to construct a roadway or rail line, would the condemned be considered the "responsible party", freeing NJDOT or NJ Transit from having to perform the remedial action for the property?

This guidance is directed at the linear construction entity, they are by definition not responsible parties. The Department does not intend to draw any conclusions about who the responsible party is in any given situation. Each party should obtain legal counsel regarding their responsibility under the Spill Act or other remediation statutes.

We agree that the person conducting a linear construction project is not required to obtain remedial action permits (deed notice or ground water classification exception area) for contamination that is left within the construction corridor.

This statement is correct.

We agree that the person conducting a linear construction project is not required to conduct public notification or outreach pursuant to NJAC 7:26E-1.4 because linear construction projects are remediation projects conducted pursuant to the Technical Rules, NJAC 7:26E.

This statement is correct.

Historical fill - We agree that the person conducting a linear construction project may assume that historic fill material contains the contaminants at concentrations listed in NJAC 7:26E-4.6 without sampling. We understand that historic fill can be re-used in the project.

This statement is correct.

We agree a person conducting a linear construction project is not required to call the Department's hotline to report the presence of historical fill and ground water investigation is not required to be assessed.

This statement is correct.

This section specifies that the PCLCP should prepare and submit, with the requisite form, a Final LCP Report. It does not specify that the report should be prepared by a LSRP for the PCLCP, nor does proposed N.J.A.C. 7:26C-16(a)7. Consequently, it is unclear whether a LSRP must prepare the report.

The forms should be prepared by the LSRP, there is a certification section provided for this purpose.

The definition of a linear construction project, and the need to follow the guidance, is premised on the threshold of generating more than 200 cubic yards of contaminated material. It is not necessary to repeat that premise in different sections of the guidance.

Linear construction entities are free to hire LSRPs and remediate encountered contamination in conformance with ARRCS and the Technical Requirements in order to pursue an RAO.

NJDEP TECHNICAL GUIDANCE
Draft Document Review Form

COMMITTEE: Fill Technical Guidance Committee
Historic
DOCUMENT: *Fill and Diffuse Anthropogenic Pollutants Technical Guidance*
Historic

Wednesday, June 1st, 2011

START of Comment Period:

END of Comment Period: **Wednesday, July 13, 2011**

Commentor Name: **Master List of compiled comments**
Affiliation: ***NJDEP***

Page	Chapter	Section	Subsection	Comments	Response
3	1			If the LSRP uses professional judgement and varies from the Technical Rule requirments to determine that investigation or remediation for PAHs beneath a parking lot, etc, is not necessaryDepartment's will their be a requirement to submit a variance form for each case? It seems overly redundant $_{to}$LSRP submit a form for every case or AOC that acknowledges that there are likely or even always PAHs beneath parking lots, etc. This adds unnecessary cost and burden for something that should be self evident.	The Department expects LSRPs to use professional judgment when applying the rules and guidance in order to conduct a site investigation. If an varies from a rule they will provide a discussion regarding how they varied and why and this should be indicated on the appropriate forms. Deviations from guidance should be identified in submitted documents. The Technical Rule and this guidance does not require the collection of analytical samples from historic fill material. As such, a variance in this situation would not be required. If the LSRP/RP elects to collect samples, the sampling locations should be selected to be representative of the historic fill material and not be potentially biased by the asphalt. Note that PAH analysis is recommended when historic fill material samples are to be collected for analysis. When historic fill material contamination is detected above the Department's health based levels at a site it is important to have mechanisms to control exposure. What might be self evident to the investigator may not be self evident to a property buyer and future occupants of the property.
3	1			The draft guidance document includes a statement that "some of the recommendations providedSection here differ from the Technical Rule requirements." The discussion indicates that the investigator may follow recommendations in the draft guidance document and simply note that they have varied from the rule requirements but have followed the technical guidance. The draft guidance document should point out each of the instances where recommendations differ from the TRSR and provide an explanation to assist the investigator in complying with SRRA.	1 of the guidance has been edited to clarify when investigators should vary from the current Technical Requirements.
3	1	1		3rd Para. -Administrative Procedures process comment:The guidance should not reach "beyond" the regulations with specific prescriptive procedures.The Department should not include a procedure in the guidance that has the weight of a requirement that has not been subject to public comment.	Application of the recommendations contained in the guidance is entirely voluntary. An investigator may continue to apply the requirements in the Technical Rules. The proposed Technical Rules, that were published on Aug 15, 2011, reflect the recommendations contained in this guidance. These rules are now open for public comment. Based on review of the comments and the adoption of the rules the stakeholder committee will revise the historic fill material guidance accordingly.

3	2			The guidance states: "The investigator may either remediate historic fill under the assumption that it is contaminated or they may establish, via sampling, that the historic fill material is not contaminated above the Department's residential soil remediation standards". Other options (such as institutional controls) may be appropriate depending on land use (e.g., contaminant levels above residential but below industrial at a commercial site). The guidance must reflect these options.	The guidance has been revised to clarify this situation.
3	2			The draft guidance document offers two options to address historic fill at a site: "The investigator may either remediate historic fill under the assumption that it is contaminated or they may establish, via sampling, that the historic fill material is not contaminated above the Department's residential soil remediation standards, N.J.A.C. 7:26D-4." This section should also point out that the investigator may choose to characterize the historic fill material, as is noted in the TRSR at N.J.A.C. 7:26E-4.6(b).	The guidance has been revised to clarify this situation.
4	3	1		delete "north west and south east" from first sentence	The guidance has been revised to make this correction.
4	3	1		3rd paragraph; 5th sentence - change "chose" to "choose"	The guidance has been revised to make this correction.
4	3	1		3rd paragraph; last sentence - requirements for soil and GW are not similar - change sentence to "Requirements are also provided in the TRSR for ...." add the citation (N.J.A.C. 7:26E-3.12(b)4-6) to the end.	The guidance has been revised to make this correction.
4	3	1		4th paragraph - change "Since that time" to "Over time"	No change is necessary.
4	3	1		Last para. - Because the content of the revised Tech Rule is not certain, this guidance should be designated "Interim".	This change is not necessary. The Department will revise this and other guidance when the new rules come into effect
4	3	1		"Investigation requirements allow the remediating party to either sample the fill for certain contaminants or to assume that the fill is contaminated." The phrase "certain contaminants" is not clear. If this is intended to limit the definition of historic fill to the 11 contaminants identified on Table 4-2, then this does not appear to be consistent with the TRSR requirements which include the option to characterize the historic fill material. The phrase "certain contaminants" should be clarified or deleted.	The current Technical Requirements refer to N.J.A.C. 7:36E-3.4, 3.6 through 3.9 to determine sampling requirements. This requirement is not particularly clear. In general, the Department recommends that an investigator that wishes to sample material that is believed to be historic fill material should sample for PAH compounds and metals. The guidance has been revised to make this clarification.
4	3	2		Relates to pp. 4 & 5, sections 3 & 4 - Generally, DAP also impacts other media (e.g., sediments, surface water, non-historic fill ground water). The text should note that, for the purpose of this Historic Fill Guidance, DAP is limited to contaminants in soil and related ground water.	DAP may affect other environmental media, however, no change is needed because the guidance does not refer to the remediation of any other environmental media than surface soils.
5	3	2		The draft guidance document states clearly that DAP is not considered to be an AOC but still requires remediation. It is confusing why from a remediation standpoint the draft guidance document treats DAP as if it were a site-specific AOC, when by definition DAP is a background issue. N.J.A.C. 7:26E-3.7(g) currently provides a systematic approach to demonstrating background ground water contamination and states that no further remediation is required for ground water if 1) the contaminants were never historically used on the site, 2) there is no additional evidence of an onsite discharge, and 3) contamination is present in the background wells. These conditions are equivalent to the atmospheric conditions that would result in DAP. The guidance document should treat DAP in a manner similar to background groundwater contamination or natural background soil contamination.	The Guidance states: "While the Department does not consider DAP to be an AOC, pursuant to the Technical Rules at N.J.A.C. 7:26E-1.8, the contaminants present in DAP still may represent a health risk if left uncontrolled." What this means is that an investigator should not "go looking" for DAP but should take steps to mitigate exposure to it when DAP is identified at a site during the course of investigating other areas of concern. The reference to "background ground water contamination" and "background soil contamination" reflect somewhat different statutory and regulatory requirements. The Technical Rules require certain documentation when a remediating party wants to claim that ground water contamination identified on their property is caused by a "background" or up-gradient source and thus not their responsibility to remediate. The Brownfield statue at N.J.S.A. 58:10B-35(g)4 and the Technical Rules at N.J.A.C. 7:26E-3.10 address how remediating parties should determine when there are concentrations of contaminants occur naturally in soil at their site. Because the Department cannot require anyone to remediate naturally occurring constituents, the remediating party needs to collect basic information in order to determine if concentrations detected at the site are present due to discharge of a hazardous substance or are naturally occurring.
5	4			It would help to list what NJDEP considers to be other potential sources of DAP. EPA has defined non-point sources of pollution as oil, grease, and toxic chemicals from urban runoff, sediment from improperly managed construction sites, and excess fertilizers, herbicides and insecticides from agricultural lands and residential areas. EPA also notes different deposition scenarios such as rainfall, snowmelt, and water runoff.	The Department considers DAP to be contamination present on surface soils from regional atmospheric deposition. PAHs and metals are common contaminants related to DAP.

5	5	1		The draft guidance document states that "the investigator must evaluate the presence of historic fill during the preliminary assessment conducted for the site. This is inconsistent with the TRSR and practical investigation practices which require the investigator to identify historic fill during the PA. But, the historic fill is evaluated during the SI and/or RI. NJDEP should revise the text to read "the investigator must identify [not evaluate] the presence of historic fill during the preliminary assessment conducted for the site."	But we assume that even when a full blown PA is not required that basic historical site information is needed to appropriately investigate and remediate the site. The guidance has been revised to make this clarification.
6	5	1		This section states that SRRA exempts the finding of historic fill as a reportable discharge. Please clarify and confirm whether a written notification other than an LSRP retention form must be submitted to notify the NJDEP of the historic fill material.	The SRRA eliminates the requirement to call the NJDEP Hotline upon the finding of historic fill material; however, it does require the elimination of exposure using engineering and institutional controls. The investigator must submit forms associated with the later phases of investigation such as those for the site investigation report and the remedial investigation report.
6	5	2		2nd paragraph - the TRSR does not currently require HFM limited to an area within the Site to be investigated; Table 4-2 can be used to assume the HFM is contaminated; the guidance should not be more stringent than the Rule; the rationale for the change in approach should be provided. In our opinion, the approach should be the same; just because the HFM is limited to the site and not widespread does not mean it is any more likely to deviate from Table 4-2. Similarly, HFM throughout a region should not be assumed to be homogeneous or of similar characteristics or contaminants. Hence, all HFM should be able to be characterized using Table 4-2.	The Legislature directed the Department to establish a presumptive remedy for regional historic fill material. Fill that is not wide spread does not fall under the same presumption. The delineation of historic fill material within a property allows for a Deed Notice that does not include the entire site. Additional explanation and clarification has been added to the guidance document. The Technical Rules specify different requirements for ground water contamination related to historic fill material depending on whether the fill is regional or contained within the property boundaries. See N.J.A.C. 7:26E-3.12(b)6i and ii.
6	5	2		The current PID/FID threshold of 5x above background should be utilized, given the potential ambient interferences with these instruments.	The guidance has been revised to make this correction.
6	5	2		The draft guidance document states "...elevated PID/FID readings... are good indications that additional, non-historic fill AOCs are present." This statement appears to exclude elevated organic vapors from historic fill material. It should be up to the investigator to determine whether or not volatile organic compounds, and related elevated PID/FID readings, are associated with historic fill.	The Technical Rules (N.J.A.C. 7:26E-4.6(b)3iii(1) stipulates the sampling for volatile organics when field instrumentation measurements exceed 5 times background. The detection of volatile organics would prompt investigation of an area of concern within historic fill material and the LSRP may use professional judgment regarding the specific sampling to be conducted in this situation.
6 6	5 5	2 2	con't	The draft guidance document states, "Where field instrumentation (PID/FID) detects volatile organics above background, the investigator should also analyze samples for the EPA Target Compound List Volatile Organic compounds pursuant to N.J.A.C. 7:26E-2.1 (Table 2-1 and footnote 1)." This statement appears to require the investigator to analyze all samples that exhibit elevated organic vapor readings. The TRSR at 7:26E-4.6(b)3iii defines this requirement for readings greater than 5 times background, not just any readings above background. This further raises the question as to what is meant by "above background." If, for example, background is measured at 1.0 ppm and a given 6-inch sample interval exhibited an organic vapor reading of 1.1 ppm, could the investigator be accused of errors and omissions if he or she did not collect a sample from that interval for analysis of VOCs? (continuted) Both requirements (analyzing all samples with elevated PID/FID readings per the draft guidance document and analyzing all samples with PID/FID readings greater than 5 times background (TRSR) are arbitrary. While it is reasonable to analyze representative samples for VOCs, the selection of representative samples for laboratory analysis should be up to the professional judgment of the investigator. The requirement to analyze samples that exhibit elevated organic vapor readings should be modified so that the sample selection is based on professional judgment as appropriate to assess the conditions observed in the field.	Same as above.... The Technical Rules (N.J.A.C. 7:26E-4.6(b)3iii(1)...
6	5	2		The draft guidance document states: "If historic fill is not part of a regional historic fill area and is limited to an area within the site it should be investigated as an area of concern..." The trigger for this requirement is unclear because neither the draft guidance document nor the TRSR define "regional historic fill area." Further, the draft technical guidance provides no direction in the event that the historic fill is part of a "regional historic fill area." These points should be clarified in the guidance.	The Legislature directed the Department to establish a presumptive remedy for regional historic fill material. Fill that is not wide spread does not fall under the same presumption. The delineation of historic fill material within a property allows for a Deed Notice that does not include the entire site. Additional explanation and clarification has been added to the guidance document.

6	5	2		Historic fill that is not related to a "regional" issue is to be addressed as a separate AOC. In this section, please clarify what is considered to be "regional historic fill". For example, is it greater than 0.25 acres or 0.50 acres in extent, whatever is not on the NJGS historical fill maps, or only within the limits of the property boundary?	Generally, for historic fill material to be considered regional, a site under investigation would have to fall within an area of fill mapped by the NJGS or as documented using aerial photography as extending over large areas and including several to numerous properties. There is no established areal extent that defines "regional historic fill."
6	5	2	1	5th and last bullet on page 6 - currently the Rule allows for the use of aerial photos or the DEPs GIS maps to verify the presence of HFM site-wide; rationale should be provided for the change to the more costly and conservative approach of requiring a subsurface investigation on every site.	The requirements of N.J.A.C. 7:26E-4.6(b) requires soil borings or test pits in order to observe the extent of contaminated historic fill material. The guidance has not added any additional subsurface investigation requirements. The use of areal photographs remains an important line of evidence when documenting the presence and extent of historic fill material.
6	5	2	1	Section 5.2 says "Site Investigation" but in 5.2.1 the first four bullets requires determining vertical and horizontal extent which would take place during the RI not the SI. The scope of the SI for historic fill is un-necessarily costly. Much of this information can and should be gained at the RI stage.	The guidance document has been clarified to indicate that during the SI a general evaluation of the presence of historic fill material should be conducted. During the SI, analysis may be conducted to evaluate compliance with the soil remediation standards. A more detailed delineation must be conducted during the RI phase. If the historic fill material is to be presumed to be contaminated, sampling is recommended but not required in either the SI or RI phase.
6	5	2	1	The samples collected during the SI should count towards the total number of samples collected at conclusion of the RI	Samples collected in the SI may be used with the data collected during the RI. Note that analytical sampling is not required unless the LSRP/RP chooses to compare with the Soil Remediation Standards. If the historic fill material is to be presumed to be contaminated, delineation is required, not analytical sampling
6	5	2	1	Collecting discreet fill samples can result in great variability of analytical results. The use of structured composites should be allowed, to lessen the variability	Note that analytical sampling is not required unless the LSRP/RP chooses to document that contaminant concentrations in the historic fill material do not exceed the Department's residential soil remediation standards. The use of "structured composites" is currently not acceptable under the Technical Rules or proposed rule.
6	5	2	1	When extending the test pit 2 feet below the fill, care must be exercised to avoid breaching any low permeability soils underlying the fill.	The guidance has been revised to make this clarification.
6	5	2	1	The draft guidance document specifies test pits, trenches or borings at the suspected extent of the historic fill material or at the property boundaries to a depth of 2 feet below the fill material to determine the vertical and horizontal extent of the fill. This requirement is more prescriptive than the TRSR which requires a minimum of four explorations that "shall extend below the water table as necessary to establish the vertical limits of the fill material." NJDEP should eliminate the 2-foot depth requirement for consistency with the TRSR and allow for professional judgment to establish the vertical limits of fill material.	The guidance requires subsurface evaluation to a depth of two feet below the fill to determine if ground water is encountered. Since this is used as the ground water sampling trigger, alternative methods to determine depth to ground water may be considered. The reference to "at the property boundary" has been removed. The Tech. Rule and guidance requires delineation of historic fill material below the water table where such conditions exist.
7	5	2	1	final bullet - if the results confirm that the HFM is contaminated, can't the investigator at that point use Table 4-2 to characterize the fill instead of conducting a remedial investigation?	The Technical Rule currently allows use of Table 4-2, but the table has been removed from the proposed rule. It is recommended that the general nature of the fill material as identified during subsurface investigations be cited in reports and the Deed Notice rather than referring to Table 4-2. A more detailed delineation is required during the RI phase, where analytical sampling is recommended, but not required.
7	5	2	1	final sentence - recommend deleting last 3 words "of historic fill".	The document has been revised to make this correction.
7	5	2	1	1st bullet, 3rd sub-bullet - Guidance should acknowledge that fill can be heterogeous without discernable layers that can be traced. At least one representative sample should be collected. For fill with layers, significant variability can occur within a given layer, and layers (i.e., lifts) are typically interfingered. Guidance should acknowledge the complexity of fill - not layer cake - and that professional judgment is necessary to decide whether layers represent potentially different source materials or otherwise heterogeneity within fill of a similar source material.	The Department believes that LSRPs will need to use professional judgment to determine appropriate sample locations on a site-by-site basis. The guidance currently has reduced the sampling (when analytical samples are to be collected) from each strata in each boring to a more general sampling of the strata found at the site.

7	5	2	1	During evaluation of analytical results collected from historic fill, this guidance states that "if analytical results confirm that the historic fill does not exceed the Department'sresidential soil remediation standards, no further investigation of the fill is required." Please clarify if the impact to groundwater pathway needs to be addressed during this data evaluation and provide justification for no need to compare the results to the NJDEP impact to groundwater screening levels.	When sampling has been conducted upon historic fill material, attainment of the residential soil remediation standards is considered appropriate since it is likely that any constituent found to be above the impact to ground water soil remediation standard is due to background conditions (metals). Since the presence of historic fill material within two feet of the ground water table requires ground water sampling, potential impacts can be evaluated in those situations. At that point ground water sampling and classification exception area requirements addressed elsewhere in the guidance should be followed.
7	5	2	1	The document must provide some direction for how the data can be treated, e.g. estimate of mean, most likely value, mean at UCL, range, etc.	At this point comparison to standards should be made using single point compliance. The Attainment/Compliance Technical Committee is developing guidance regarding the conditions and methodology for when averaging or other statistical approaches would be acceptable.
7	5	2	1	Analyzing historic fill samples for full TCL/TAL+EPH will likely result in uninterpretable results. Expanded screening should be reserved only for those cases where impacts from site operations are suspected.	Analytical sampling is recommended, but not required unless an assertion is to be made that the historic fill material is clean and meets the Departments residential soil remediation standards. Even in this situation, full TCL/TAL+EPH analysis is only required on a percentage of samples.
7	5	2	1	The draft guidance document specifies two sample locations per acre with one sample per location for each historic fill layer encountered. This requirement is more prescriptive than the current TRSR (7:26E-3.12(b)2ii) which states: "Demonstrate that the historic fill material is not contaminated above the residential soil remediation standards by sampling pursuant to N.J.A.C. 7:26E-3.4, 3.6 and 3.9, as applicable." Section 3.9 of the TRSR is the only refererioed section that includes a specific sampling frequency based on area: "Areas of less than 10 acres shall be sampled at a rate of at least one sample for every two acres." Therefore, it appears that the sampling requirements of the draft guidance document reflect a four-fold increase of the minimum sampling requirements of the TRSR. NJDEP should delete the requirement for 2 sample locations per acre for consistency with the TRSR and allow for professional judgment to determine the appropriate sample frequency.	Analytical sampling is recommended, but not required unless an assertion is to be made that the historic fill material is clean and meets the Departments residential soil remediation standards. The original intent of TRSR Section 3.9 was to evaluate soil conditions in areas not expected to have had discharges. In the case of historic fill material, experience supports that contaminants are present in excess of residential soil remediation standards. Note that TRSR 4.6(b)3i states, "At least four samples per acre, per fill type are required; if the presumption is to be made that the historic fill material is not contaminated. The current guidance recommends a lower frequency of analytical sampling and not sampling every stratum from each location.
7	5	2	1	**5th Bullet:** Change the name to "Fill" or "Fill Soil". The TRSR provides a basis for sample selection using the TPHC data from the initial sampling. This had incorporated use of less costly quick turn-around laboratory analysis to facilitate decisions for contingency analyses. Also, TPHC was one constituent, versus PAHs which includes typically 16 constituents. Therefore, include a similar sample selection decision basis for the 25% analytical parameters. We suggest using Total PAHs for TCL organics (metals are already being run at 100%). However, analytical hold times should be allowed to be extended by freezing soil samples, consistent with SW-846 methods to facilitate contingent analysis decisions.	Heading revised to "Fill Soil" This guidance document recommends that if soil samples are to be collected, that they be analyzed for the EPA Target Compound List (TCL) Polynuclear Aromatic Hydrocarbons (PAHs) and EPA Target Analyte List (TAL metals). In addition, twenty-five percent of all samples should be analyzed for complete TCL/TAL analysis and Extractable Petroleum Hydrocarbons (EPH), with a minimum of one sample, per stratum/fill type, per site. Note that analytical sampling is only required where historic fill material is to be compared with residential soil remediation standards, rather than presumed to be contaminated. Experience has indicated that total petroleum hydrocarbons was not a good indicator or historic fill material and the old TPH Method 418.1 is no longer available. The proposed TSRS makes no mention of analytical methods for historic fill material sampling so the guidance will not be out of compliance with the May 2012 TRSR.

7	5	2	2	The draft guidance document states: "Once the presence of historic fill is confirmed and the fill material is located within two feet of the seasonally high water table, the investigator may…Assume that the fill ground water is contaminated above the applicable ground water remediation standards N.J.A.C. 7:26D-2 and conduct a remedial investigation pursuant to N.J.A.C. 7:26E-4.6(b)." The reference to section 4.6(b) is confusing as that section of the current TRSR refers to the remedial investigation of soils. N.J.A.C. 7:9-6.6(a) requires that a CEA description specify the ground water contaminants so it is not clear how one could simply "assume that the fill ground water is contaminated" and still make a complete CEA proposal. The draft guidance document later appears to conflict with the recommendation to assume that the fill ground water is contaminated. Section 5.3.2 states: "If information needed for a ground water classification was not obtained during the site investigation as outlined in section 5.2.2 it should be gathered during the remedial investigation." The CEA guidance states that "In some cases (e.g., sites where ground water has been contaminated by metals from historic fill or other discharges), the Department may [emphasis added] accept a proposal for an "indeterminate" CEA longevity." The CEA guidance does not explicitly offer this possible agency acceptance for groundwater contaminants that are not metals. The draft guidance document should state clearly whether a CEA proposal based on assumed contamination constitutes a variance and provide clear guidance as to how such a CEA proposal should be presented in regards to contaminant concentrations.	The reference to N.J.A.C. 7:26E-4.6 has been changed to 7:26E-4.4 – Remedial Investigation of Ground Water. The guidance provides for the sampling of ground water during the SI phase or the assumption that contamination is present that will be evaluated during the RI phase. The current CEA guidance is somewhat out of date and does not specifically address areas of historic fill material. Revision of the CEA guidance is anticipated in the near future. The intent of the historic fill material guidance is to address all ground water contaminants associated with historic fill material (not just metals).
8	5	2	2	first bullet - recommend inserting the word "soil" in front of "remedial investigation".	Clarification provided to refer specifically to the ground water remedial
8	5	2	2	Final bullet - add to the middle of the sentence "or if the ground water is assumed to be contaminated" then the investigator must est a CEA....	A CEA can not be established based upon the assumption that ground water is contaminated.
8	5	2	2	2nd bullet - If non-drillable fill extends to the property line and in the downgradient direction, how is the 10 foot minimum issue to be resolved? Offer some practicable guidance or at least acknowledge that professional judgment to implement a practicable solution is acceptable.	Where conditions exist that preclude the collection of a ground water sample within the historic fill material area of concern, according to N.J.A.C. 7:26E-4.4(e)2, a ground water sample must be collected within 10 feet of the area of concern. In situations where that is not possible, we expect the use of professional judgment in selecting sample location.
8	5	2	2	Further information is warranted regarding requesting that the NJDEP establish a groundwater CEA should historic fill material extend beyond the property boundary. How does the investigator know if historic fill material has extended beyond the property boundary if we are not testing the fill material? Further information should include who to contact at the NJDEP and what the responsibilities of the responsible party are once the NJDEP has established the CEA.	A CEA would only be established due to the presence of historic fill material when sampling actually confirms exceedance of applicable Ground Water Remediation Standards. Where confirmed, a CEA would only be established within the property boundaries of the site under investigation.
8	5	2	2	If we are assuming that the historic fill material in the unsaturated zone is impacted and using table 4-2-Target Contaminant Concentrations in Typical Historic Fill and the historic fill is within two feet of the groundwater table, we should be able to analyze the groundwater for only PAHs and metals and not the complete TCL/TAL list.	The required sampling for full TCL/TAL has been determined to be appropriate and will act as a means to evaluate contamination that may arise from other areas of concern that may exist within the historic fill material.
8	5	2	2	If historic fill is confirmed the draft guidance document requires the investigator to "Collect one sample pursuant to N.J.A.C. 7:26E-3.7 using any generally acceptable sampling method specified in the NJDEP Field Sampling Procedures Manual. The Department recommends the use of the low-flow sampling method to minimize sediment in the sample in order to prevent a false positive result." This requirement appears to contradict previous Department recommendations that preclude the use of LFPS for the first round of sampling. The guidance should clarify that the use of LFPS for the initial, and possibly only, round of sampling associated with an historic fill AOC is considered acceptable by NJDEP or if this constitutes a variance. If this will be considered a variance, the guidance should provide an explanation to support the variance.	Were the guidance provides direction that differs from the existing rule – it will constitute a variance and should be documented as such. The investigator would only need to say that they followed the Historic Fill guidance. After the rules are adopted this will be a moot point.

8	5	2	2	**Ground Water:** The opening paragraph and first bullet seem to contradict the TRSR and need clarification and or revision. Pursuant to NJAC 7:26E-3.12, ground water sampling and analysis are required in accordance with NJAC 7:26E-3.7 when contaminated historic fill is present within two feet of the seasonal high water table. The option in the guidance to conduct a remedial investigation per NJAC 7:26E-4.6(b) seems untenable since that part of the TRSR does not address ground water. The option to conduct a soil RI for historic fill is included in Section 5.2.1 of the Guidance. We suggest changing the option to be the choice of either; (1) contaminated historic fill not within 2-feet of the seasonal high water table requires no further ground water investigation; (2) contaminated historic fill within 2-feet of the seasonal high water table requires further ground water investigation per NJAC 7:26E-3.12 and 3.7.	The reference to N.J.A.C. 7:26E-4.6 has been changed to 7:26E-4.4. Clarification has been provided in both the SI and the RI sections of the guidance to indicate that where historic fill material is not located within 2 feet of the seasonal high water table, ground water sampling is not required
8	5	2	2	**Ground Water; 5th Bullet:** The guidance indicates ground water sample(s) should be analyzed for full TAL/TCL parameters. However, this is not consistent with the ground water investigation requirements of NJAC 7:26E-3.7, which indicates selection of analytical parameters should be based on contaminant solubility of any soil contaminant detected in the area of concern, and all of the soil between the contaminant and the saturated zone is less than 15 percent silt and clay; or any part of the area of concern at which the soil contamination was detected is located within 2,000 feet of a public supply well. The Guidance should be revised to be consistent with the TRSR and facilitate use of soil fill sample analytical data to identify contaminants for further analysis in ground water.	We acknowledge that these requirements differ from the existing rules and establish new/minimal sampling to establish a CEA within historic fill material areas. After the rules are adopted this will be a moot point.
9	5	2	2	first bullet - TRC disagrees with the change in approach for HFM contained within the property boundaries; is DEP assuming that just because the fill is contained to the site and not regional that somehow that makes the fill more likely to be contaminated with compounds not included or Table 4-2? Or more likely to contaminate GW? why is it ok for a CEA to be automatically used on a site where HFM is widespread or regional, but a GW RI is required for sites with a limited amount of fill? No rationale is provided for the change to this more costly and conservative approach.	The current guidance has not changed the approach requiring delineation of the historic fill material or ground water found to be contaminated from the fill. Where historic fill material is found to be limited to part of a site, the extent of the fill and when required, the extent of the ground water contamination must be delineated rather than just accepting site-wide engineering and institution controls and CEA.
9	5	2	2	Last sub-bullet - Change the word "completely contained" to "…material limits occur completely within the property boundaries…"	Change is not necessary.
9	5	3	1	First bullet - Re the 4 borings per acre frequency; there are often times when the building (or buildings) occupy most of the property, leaving only very small areas accessible for drilling. In these instances, DEP should allow a reduced number of borings instead of 4 per acre; the guidance should speak to this scenario.	The investigator always has the ability to vary from a recommended sampling frequency based on professional judgment. It not necessary to restate that fact through out the guidance.
9	5	3	1	Again, TRC disagrees with the more conservative approach for fill within a site. If a wetland area within a site is clearly defined on an aerial photo and that area has obviously been filled; it is unclear why this area should be treated any differently than large coastal areas that have bee filled. The size of the area does not dictate the quality of the fill; so both types of filled areas should be addressed in the same manner.	Answered above.
9	5	3	1	The draft guidance document states: "if historic fill is not part of a regional historic fill area and is limited to an area within the site it should be investigated as an area of concern..." The trigger fo this requirement is unclear because neither the draft guidance document nor the TRSR define "regional historic fill area." Further, the draft technical guidance provides no direction in the even that the historic fill is part of a "regional historic fill area." These points should be clarified in the guidance.	Answered above.
9	5	3	1	The draft guidance document "allows the investigator to characterize contamination in historic fil by using the contaminant and values provided in Table 4-2 below or by collecting and analyzing contaminant samples for each type of historic fill present to determine the site specific contaminant levels.." The draft guidance document should acknowledge that the historic fill at a given site likely contains contaminants other than those on Table 4-2 and that those contaminants, if associated with the historic fill, should also be managed as historic fill.	The reference to "Table 4-2 below" has been modified so that the table will not be included. While experience supports that PAHs and metals are the most significant constituents present in historic fill material that exceed soil remediation standards, the table was never meant to be exclude other contaminants. Reference to Table 4-2 is removed from the proposed TRSR. The identification of volatile organics may be indicative of discharges within historic fill material and the detection of PCBs may trigger other federal TSCA requirements.

10	5	3	1	"The Department recommends that the use of Table 4-2 for the contaminant characterization in the Deed Notice be suspended. Instead the Department recommends that the investigator provide a general description of the fill material including information such as the depth below ground surface, thickness and characteristics of the fill material (i.e., ash, brick, debris)." It is unclear how this is to be incorporated into the deed notice text. The model deed notice text specifically references Table 4-2 for historic fill and otherwise requires concentration data be presented in Appendix B for the restricted use area. Given that NJDEP does not allow changes to the text of the model deed notice it is unclear how the recommendation can be implemented by the remediating party.	While the Department does not encourage changes to the "boiler plate" language in the deed notice there are circumstances when not changing the language would result in wrong or misleading information in the deed notice. Based on this guidance the investigator should delete the reference to Table 4-2 and insert the language suggested by this guidance. Note that the Deed Notice boilerplate language in the proposed TRSR has been changed to "A) Only for historic fill material extending over the entire site or a portion of the site and for which analytical data are limited or do not exist, a narrative that states that historic fill material is present at the site, a description of the material (e.g., ash, cinders, brick, dredge material), and a statement that such material may include, but is not limited to, contaminants such as PAHs and metals", to be in agreement with the guidance document.
10	5	3	2	"a ground water classification" - do you mean a CEA? Please clarify. Also last 2 paragraphs of p 10 seem to be in reverse order. Moreover, should suggested wording in the Deed Notice for DAP be provided, too?	Agreed. Section has been edited. Disagree that DAP would need to be specifically mentioned in the deed notice. If DAP is on the site there will be analytical data to include in the Deed Notice.
10	5	4		1rst Para. - Deed Notice - reference NJAC 7:26E- 8.2 and Appendix E or applicable revised rule sections.	Agreed. Section has been edited.
10	5	4		2nd Para. - if the site is non-residential / industrial, and the non--residential soil standards in the soil cap are not exceeded, remediation of the cap may not be necessary though engineering and institutional controls would still be required.	No change needed because the document already says that "Based on the current or intended use of the site a cap may be required to prevent exposure to the contaminants in the historic fill material."
10	5	4		The draft guidance document states: "The investigator may demonstrate that historic fill is already capped, making additional engineering controls unnecessary. Soil sampling conducted consistent with section 5.2.1 of this draft guidance document must be conducted to confirm that a soil cap, if present, does not exceed the Department's residential soil remediation standards." This section should be revised to note that sampling will not be required if the cap consists of certified clean fill material per 7:26E-8.4(b)2iv.	Agreed. Section has been edited.
11	6			**DAP:** While the attempt to acknowledge DAP in a remedial context is appreciated, the Guidance should be reviewed and revised to incorporate the provisions in the applicable statute that address limits to remediation requirements for contaminants that migrate onto a property from off-site sources.	The Department believes that DAP is a regional issue more akin to historic fill material than a discharge migrating from a near by contaminated site. No changes will be made to the document.
11	6	1		This section should be more informative for a guidance document. Definition in Section 3.2 mentions atmospheric deposition. What is the Department's information on this throughout the state? There are statewide background studies on arsenic. This and other studies done by / for NJDEP, or used by NJDEP, should be referenced and available on NJDEP website. Make other references available for other contaminants or provide authoritative links.	Agreed. Document has been edited.
11	6	1		Section 3.2 states that DAP is not defined as an AOC in the Tech Rule, unlike historic fill. Yet if the Department is requiring the PRCR to remediate exceedances of the SRS, then it should be included in the defination of an AOC. It should be noted that capping may not be required if exceedances are below the non-residential SRS on properties where current and future land use is non-residential. If this guidance is posted as an "Interim" Guidance, as recommended above, then DAP should be identified/defined, and the reader advised of it's pontential to be present under certain conditions. The requirement to remediate is inappropriate at this time. The Department should further it's risk evaluation of DAP and propose regulations through the Administractive Procedures process, subject to public comment as applicable.	The Department does not require any person to investigate DAP. The guidance simply allows the investigator to use the concept of DAP when evaluating data.

REFERENCES

DEP GUIDANCE AND TRAINING LIBRARY

Site Remediation Guidance Library

Types of Guidance

1. Technical Guidance

Developed using a Stakeholder Process
The Technical Guidance Documents Contained in this Section were developed using a Stakeholder process. Click on the topics below for a brief description of the document content, a downloadable copy of the document, a response to significant comment (if available), and additional links to training opportunities. To view the Department's policy for varying from a rule and applying technical guidance, click here.

1. Analytical Methods
2. Attainment/Compliance
3. Conceptual Site Model (CSM)
4. Ecological Evaluation Technical Guidance
5. Alternative and Clean Fill Guidance for SRP Sites
6. Historic Fill and Diffuse Anthropogenic Pollutants Guidance
7. Immediate Environmental Concern (IEC)
8. Landfills Investigation Guidance
9. Linear Construction Technical Guidance
10. LNAPL
11. Monitored Natural Attenuation
12. Ground Water SI/RI/RA
13. Preliminary Assessment
14. Presumptive and Alternate Remedy Guidance
15. Receptor Evaluation
16. Soil SI/RI/RA
17. Technical Impracticability (TI)
18. Technical Guidance for Investigation of Underground Storage Tank Systems
19. Vapor Intrusion

Developed prior to enactment of SRRA
The Technical Guidance Documents contained in this section were developed by the NJDEP prior to enactment of SRRA, and without extensive Stakeholder input/review. The Department will seek stakeholder input in the future. Click on the topic for a downloadable copy of the document.

1. Characterization of Concrete and Clean Material Certification
2. Extractable Petroleum Hydrocarbons Methodology Replacement of TPH Method 418.1 for the Site Remediation Program
3. IEC-GAC POET Specifications

Types of Guidance

1. Technical Guidance
   - Developed using a Stakeholder Process
   - Developed prior to enactment of SRRA
2. Financial Guidance: Fee / Grant
3. Administrative Guidance
4. Permits

Related Links

- Technical Consultation Posted 16 August 2010
- Summary of Regulatory and Mandatory Timeframe [pdf 80 Kb]
- Technical Guidance Subcommittees and Members [pdf 28 Kb] Updated 31 January 2011

4. NJDEP Field Sampling Procedures Manual
5. Protocol for Addressing EPH Contamination
6. Coordination of NJDEP and USEPA PCB Remediation Policies
7. Sheen Remediation Guidance, February 2006

2. Financial Guidance: Fee / Grant

1. Cost Guidance
2. Fees/Oversight Cost Guidance Document
3. Hazardous Discharge Site Remediation Fund Application Guidance
4. Petroleum Underground Storage Tank Remediation Fund Application Guidance
5. Technical Assistance Grant (TAG) Guidance
   (NOTE: This document was not in the original list, but it is an important part of our TAG guidance package.)
6. Technical Assistance Grant (TAG) Application Instructions
7. Technical Assistance Grant (TAG) Cost Guide
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4. Permits

1. NJPDES Discharges to Ground Water Technical Manual for the Site Remediation Program
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1. Technical Guidance

Developed using a Stakeholder Process

1. Analytic Methods

Brief Description of Document

Document:	Analytic Methods Technical Guidance Document
Response to Comments:	Analytic Methods Response to Comments
Training Links on this topic:	SRP Training - Analytical Methods Technical Guidance Document - TBA

2. Attainment/Compliance

Brief Description of Document

Document:	Attainment/Compliance Technical Guidance Document
Response to Comments:	Attainment/Compliance Response to Comments
Training Links on this topic:	SRP Training - Attainment/Compliance - TBA

3. Conceptual Site Model (CSM)

Brief Description of Document

Document:	Conceptual Site Model Technical Guidance Document [pdf 1011 Kb] Version 1.0, issued 12/16/11
Response to Comments:	Conceptual Site Model Response to Comments [pdf 37 Kb]
Training Links on this topic:	SRP Training - Conceptual Site Model - January 30, 2012

4. Ecological Evaluation Guidance

Brief Description of Document

Document:	Ecological Evaluation Technical Guidance Document [pdf 5,432 Kb] Version 1.2, issued 8/29/12
Response to Comments:	Ecological Evaluation Technical Guidance Response to Comments [pdf 184 Kb]
Training Links on this topic:	SRP Training - Ecological Evaluation

5. Alternative and Fill Guidance for SRP Sites

Brief Description of Document
This document was previously titled "Fill Guidance". The name has been changed to better reflect document content and to avoid confusion with the Historic Fil Technical Guidance Document

Document:	Alternative and Clean Fill Guidance for SRP Sites [pdf 140 Kb] Version 2.0, Posted 12/29/11
Response to Comments:	Alternative and Clean Fill Guidance for SRP Sites Response to Comments [pdf 97 Kb]
Training Links on this topic:	SRP Training - Fill Guidance at SRP Sites -

6. Historic Fill and Diffuse Anthropogenic Pollutants Technical Guidance

Brief Description of Document

Document:	Historic Fill and Diffuse Anthropogenic Pollutants Technical [pdf 72Kb] Version 1.0, issued 10/24/11
Response to Comments:	Historic Fill and Diffuse Anthropogenic Pollutants Response to Comments [pdf 70Kb]
Training Links on this topic:	SRP Training - Fill Guidance at SRP Sites -

7. Immediate Environmental Concern (IEC)

Brief Description of Document	
Document:	Immediate Environmental Concern (IEC) Technical Guidance Document [pdf 448Kb] DRAFT Version 1.0, issued 8/11
Response to Comments:	Immediate Environmental Concern (IEC) Response to Comments [pdf 99 Kb]
Training Links on this topic:	SRP Training - IEC

8. Landfills Investigation Guidance

Brief Description of Document	
Document:	Landfills Investigation Guidance [pdf 393 Kb] Version 1.1, issued 8/1/2012
Response to Comments:	Landfills Investigation Response to Comments [pdf 17 Kb]
Training Links on this topic:	SRP Training - Landfills Investigation - TBA

9. Linear Construction Technical Guidance

Brief Description of Document	
Document:	Linear Construction Technical Guidance [pdf 65 Kb] Version 1.0, issued 1/27/2012
Response to Comments:	Linear Construction Response to Comments [pdf 482 Kb]
Training Links on this topic:	SRP Training - Immediate Environmental Concern (IEC)

10. LNAPL

Brief Description of Document	
Document:	LNAPL Technical Guidance Document [pdf 262Kb] Version 1.2, issued 8/1/2012
Response to Comments:	LNAPL Response to Comments [pdf 37 Kb]
Training Links on this topic:	SRP Training - LNAPL

11. Monitored Natural Attenuation

Brief Description of Document	
Document:	Monitored Natural Attenuation Technical Guidance Document [pdf 780 Kb] Version 1.0, issued 3/1/2012

Response to Comments:	Monitored Natural Attenuation Response to Comments [pdf 131 Kb]
Training Links on this topic:	SRP Training - Monitored Natural Attenuation

12. PA/SI/RI Ground Water

Brief Description of Document	
Document:	Ground Water - SI/RI/RA Technical Guidance Document Version 1.0, issued 4/3/12 - Posted 5 April 2012
Response to Comments:	Ground Water - SI/RI/RA Response to Comments
Training Links on this topic:	SRP Training - PA/SI/RI Ground Water - April 10, 2012

13. PA Soils

Brief Description of Document	
Document:	Preliminary Assessment Technical Guidance Document Version 1.0, issued 1/30/2012
Response to Comments:	Preliminary Assessment: Response to Comments
Training Links on this topic:	SRP Training - Preliminary Assessment - TBA

14. Presumptive and Alternate Remedy Guidance

Brief Description of Document	
Document:	Presumptive and Alternate Remedy Guidance Technical Guidance Document [pdf 67Kb] Version 1.0 issued 7/22/11
Response to Comments:	Presumptive and Alternate Remedy Guidance Response to Comments [pdf 99 Kb]
Training Links on this topic:	SRP Training - Presumptive and Alternate Remedy Guidance

15. Receptor Evaluation

Brief Description of Document	
Document:	Receptor Evaluation Technical Guidance Version 1.4 issued 9/7/11
Response to Comments:	
Training Links on this topic:	SRP Training - Receptor Evaluation

16. SI/RI/RA Soils

Brief Description of Document	
Document:	Soil - SI/RI/RA Technical Guidance Document
Response to Comments:	Soil - SI/RI/RA Response to Comments
Training Links on this topic:	SRP Training - SI/RI/RA Soils - TBA

17. Technical Impracticality (TI)

Brief Description of Document

Document:	Technical Impracticality (TI) Guidance Document
Response to Comments:	Technical Impracticality (TI) Response to Comments
Training Links on this topic:	SRP Training - Technical Impracticality - TBA

18. Technical Guidance for Investigation of Underground Storage Tank Systems

Brief Description of Document

Document:	Technical Guidance for Investigation of Underground Storage Tank Systems Version 1.0 issued 4/17/12
Response to Comments:	Technical Guidance for Investigation of Underground Storage Tank Systems Response to Comments
Training Links on this topic:	SRP Training - Technical Guidance for Investigation of Underground Storage Tank Systems

19. Vapor Intrusion

Brief Description of Document

Document:	Vapor Intrusion Technical Guidance Page Version 2.0 issued 1/13/12
Response to Comments:	Vapor Intrusion Response to Comments
Training Links on this topic:	SRP Training - Vapor Intrusion - TBA

Developed prior to enactment of SRRA

1. Characterization of Concrete and Clean Material Certification

Brief Description of Document
The Guidance for Characterization of Concrete and Clean Material Certification for Recycling document includes Sampling and Analysis Protocol guidance below is for certain contaminants that the Department recognizes may be found in concrete from contaminated sites. Only uncontaminated concrete will normally qualify for unrestricted recycling, while some minimally contaminated concrete or concrete fines may qualify for beneficial uses but only with Department approval.

Document:	Characterization of Concrete and Clean Material Certification Document (Via the NJDEP Solid & Hazardous Waste Program)
Training Links on this topic:	SRP Training - Vapor Intrusion - TBA

2. Extractable Petroleum Hydrocarbons Methodology Replacement of TPH Method 418.1 for the Site Remediation Program

Brief Description of Document
This document has been superseded by the most up-to-date version of the document "Phase-in for the implementation of the *'Protocol for Addressing Extractable Petroleum Hydrocarbons' and the associated*

analytical method 'Analysis of Extractable Petroleum Hydrocarbon Compounds (EPH) in Aqueous and Soil/Sediment/Sludge Matrices'.

Documents:

Replacement of TPH Method 418.1 for the Site Remediation Program Page

Phase-in for the implementation of the "Protocol for Addressing Extractable Petroleum Hydrocarbons" and the associated analytical method "Analysis of Extractable Petroleum Hydrocarbon Compounds (EPH) in Aqueous and Soil/Sediment/Sludge Matrices" Technical Guidance Document [pdf 41 Kb]
Version 3.0, issued 08/09/2010
http://www.nj.gov/dep/srp/guidance/srra/eph_phasein.pdf

Training Links on this topic: SRP Training - EPH Methodology Replacement of TPH Method 418.1 for the Site Remediation Program

3. IEC-GAC POET Specifications

Brief Description of Document
This document gives the minimum specifications for a Granular Activated Carbon Point-of-Entry Treatment System.

Document: IE -GAC POET Specifications [pdf 116 Kb]
Issued 09/2009

Training Links on this topic: TBA

4. NJDEP Field Sampling Procedures Manual

Brief Description of Document
The NJDEP's *Field Sampling Procedures Manual* is the most current technical guidance associated with procedures and equipment utilized for the collection of environmental samples. It also represents the first edition published on the World Wide Web, which brings the benefit of improved access to information for the public and regulated community. The primary intent of the manual has always been to promote accuracy and consistency when environmental samples are collected and prepared for chemical analysis by public and private entities.

Document: NJDEP Field Sampling Procedures Manual Page

Training Links on this topic: SRP Training - NJDEP Field Sampling Procedures Manual

5. Protocol for Addressing EPH Contamination

Brief Description of Document
This New Jersey Department of Environmental Protection (Department) guidance document will provide direction on how to address petroleum hydrocarbon mixture discharges except for those that originate from the more volatile petroleum hydrocarbon mixtures (i.e., gasoline, kerosene, jet fuel, and mineral spirits). This guidance document provides a health-based approach to accomplish the remediation of petroleum hydrocarbon mixtures.

Document: Protocol for Addressing EPH Contamination Technical Guidance Document [pdf 92 Kb]
Version 5.0, issued 08/09/2010
http://www.nj.gov/dep/srp/guidance/srra/eph_protocol.pdf

Training Links on this topic: TBA

6. Coordination of NJDEP and USEPA PCB Remediation Policies

Brief Description of Document

The Site Remediation Program has established residential and non-residential direct contact Soil Remediation Standards (SRS) for polychlorinated biphenyls (PCBs) based upon a legislatively mandated 1 X 10^{-6} cancer end-point. The residential SRS (RSRS) is 0.2 ppm and the non-residential SRS (NRSRS) is 1 ppm.

Document: Coordination of NJDEP and USEPA PCB Remediation Policies

Training Links on this topic: TBA

7. Sheen Remediation Guidance, February 2006

Brief Description of Document
"Sheen" Remediation Policy Initiative

Document: Sheen Remediation Guidance

Training Links on this topic: TBA

2. Financial Guidance: Fee / Grant

1. Cost Guidance

Brief Description of Document
http://www.nj.gov/dep/srp/srra/forms/remediation_cost_review_est_ins.pdf

Document: Cost Guidance Technical Guidance Document
Version , issued

Training Links on this topic: TBA

2. Fees/Oversight Cost Guidance Document

Brief Description of Document
The purpose of this document is to provide guidance to the person responsible for conducting the remediation regarding the fees that apply to specific activities and submittals subject to the Spill Compensation and Control Act, Site Remediation Reform Act, Underground Storage Tank Act, Industrial Site Recovery Act, and child care center licensing requirements. This guidance describes the steps to identify an annual remediation fee for new cases and those fees that still are in place, and when they apply. This guidance does not take into consideration every combination or scenario that may exist, but rather is designed to addresses a majority of the most common occurrences. It should also be noted that section XI of this Guidance identifies those cases that are, and may in the future be, subject to direct billing for oversight costs pursuant to the Administrative Requirements for the Remediation of Contaminated Sites (ARRCS) rule, specifically N.J.A.C. 7:26C-4.5.

Document: Fees/Oversight Cost Guidance Document [pdf 88 Kb]
Version 1.1, issued 6/1/12

Training Links on this topic: TBA

3. Hazardous Discharge Site Remediation Fund Application Guidance

Brief Description of Document
The Hazardous Discharge Site Remediation Fund (HDSRF) grants and loans are available to public entities, private entities, and non-profit organizations (as described in section 501(c)(3) of the federal internal revenue code) that perform a remediation pursuant to DEP's Site Remediation Program requirements.

The HDSRF Fund page below provides current information about the Fund.

Document: Hazardous Discharge Site Remediation Fund Page
http://www.nj.gov/dep/srp/finance/hdsrf/

Training Links on this topic: TBA

4. Petroleum Underground Storage Tank Remediation Fund Application Guidance

Brief Description of Document
The UST Fund provides financial assistance in the form of loans and grants to eligible owners and operators for the remediation of discharges of residential and other unregulated petroleum underground storage tanks, and for the closure and remediation of State regulated petroleum underground storage tanks.

The UST Fund page below provides current information about the Fund.

Document: Petroleum Underground Storage Tank Remediation Fund Page
http://www.nj.gov/dep/srp/finance/ustfund/

Training Links on this topic: TBA

5. Technical Assistance Grant (TAG) Guidance

Brief Description of Document
This guidance document will assist community groups and licensed site remediation professionals (LSRP) in determining who is eligible for a technical assistance grant (TAG), how to apply for a TAG, what are eligible TAG activities and the reporting requirements associated with a TAG.

Document: Technical Assistance Grant (TAG) Guidance [pdf 36 Kb]
Version 1.1, issued 01/31/2011
http://www.nj.gov/dep/srp/guidance/srra/tag_guidance.pdf

Training Links on this topic: TBA

6. Technical Assistance Grant (TAG) Application Instructions

Brief Description of Document

Document: Technical Assistance Grant (TAG) Application Instructions [pdf 36 Kb]
Version 1.2, issued 03/04/2011
http://www.nj.gov/dep/srp/srra/forms/tag_application_ins.pdf

Training Links on this topic: TBA

7. Technical Assistance Grant (TAG) Cost Guide

Brief Description of Document
The TAG Cost Guide is used by the New Jersey Department of Environmental Protection when reviewing a financial plan submitted with TAG applications.

Document: Technical Assistance Grant (TAG) Cost Guide [pdf 48 Kb]
Version 1.0, issued 12/15/2009
http://www.nj.gov/dep/srp/guidance/srra/tag_cost_guide.pdf

Training Links on this topic: TBA

8. Technical Assistance Grant (TAG) Project Summary Sheets

Brief Description of Document

Document: Technical Assistance Grant (TAG) Project Summary Sheets [xls 24 Kb]
Version 1.0
http://www.nj.gov/dep/srp/srra/forms/tag_project_summary_sheet.xls

Training Links on this topic: TBA

3. Administrative Guidance

1. CEA Guidance

Brief Description of Document
This Guidance helps with the designation of Classification Exception Areas (CEAs)

Document: CEA Guidance Page
http://www.nj.gov/dep/srp/guidance/cea/cea_guide.htm

Training Links on this topic: TBA

2. CEA Biennial Certification Compliance: Tools for Performing Well Search for CEA Biennial Certifications

Brief Description of Document
A Department computer generated well search for all wells within one mile up-gradient, side-gradient and downgradient of the ground water classification exception area is required as part of each CEA biennial certification. This requirement is outlined in the Tech Rules, specifically N.J.A.C. 7:26E-8.6(a)3. This Web page provides links and instructions for using the web-based tool.

Document: Available On-Line Tools for Receptor Evaluations & Biennial Certifications for Groundwater [pdf 19Kb]

Training Links on this topic: TBA

3. Direct Oversight Guidance: When the Department of Environmental Protection May Undertake Direct Oversight of a Remediation of a Contaminated Site

Brief Description of Document
Pursuant to Section 27b of the Site Remediation Reform Act, N.J.S.A. 58:10C-27 the Department of Environmental Protection (Department) is authorized, under certain conditions, to undertake direct oversight of the remediation of a contaminated site or a portion of a contaminated site. The Legislature has established specific conditions that trigger the Department's evaluation of the remediation of a site for direct oversight. In addition, Section 27d the Site Remediation Reform Act requires the Department to issue guidelines establishing specific criteria that the Department will evaluate in order to determine when a site or a portion of a site will be subject to direct oversight pursuant to Section 27b. The purpose of this guidance document is to fulfill this requirement and to provide the public with notice of these criteria.

Document: Direct Oversight Guidance: When the Department of Environmental Protection May Undertake Direct Oversight of a Remediation of a Contaminated Site [pdf 36 Kb]
Version 1.0, issued 11/04/2009http://www.nj.gov/dep/srp/guidance/srra/direct_oversight.pdf

Training Links on this topic: TBA

4. GIS Guidance

Brief Description of Document
Contains instruction documents for various GIS standards and deliverables required by the Technical Requirements for Site Remediation rules (Technical Requirements) at N.J.A.C. 7:26E. The goals of these documents are to ensure swift, uncomplicated compliance for submissions and efficient integration of same with the SRP's existing GIS databases.

Document: GIS Guidance Page
http://www.nj.gov/dep/srp/gis/

Training Links on this topic: TBA

5. Issuance of Response Action Outcomes (RAO)

Brief Description of Document
The New Jersey Department of Environmental Protection has issued this guidance document to assist licensed site remediation professionals in the structure of a response action outcome (RAO), the different types of response action outcomes, when a licensed site remediation professional may issue a response action outcome, to whom it may be issued and when the licensed site remediation professional is to include specific inserts and reporting requirements in a response action outcome.

The Site Remediation Program has prepared a single response action outcome shell document to ensure content consistency. The licensed site remediation professional is expressly prohibited from modifying the content of a response action outcome except as explicitly provided for in this guidance. The licensed site remediation professional can not apply variance provisions in any Department rule to this document.

Documents:

Issuance of Response Action Outcomes (RAO) [pdf 112 Kb]
Version 1.4, issued 5/25/2011
http://www.nj.gov/dep/srp/guidance/srra/rao_guidance.pdf

Model Response Action Outcome [doc 126 Kb]
(Appendix D for ARRCS Rule)
http://www.nj.gov/dep/srp/regs/arrcs/arrcs_app_d.doc

Training Links on this topic: TBA

6. Licensing of Proposed Child Care Centers

Brief Description of Document
This Web page provides environmental guidance for proposed and existing child care facilities and educational facilities.

Document:

Environmental Guidance for All Child Care Facilities & Education institutions Page
http://www.state.nj.us/dep/dccrequest/

Training Links on this topic: TBA

7. Preparation of the Case Inventory Documents

Brief Description of Document
The Case Inventory Document (CID) is a concise summary of all areas of concern (AOCs) and major case components that serve to form the basis for remedial decisions. The person responsible for conducting the remediation shall develop and submit the CID with each remedial phase report and Direct Oversight Documents. The tracking of AOCs and major case components allows for the person responsible for conducting the remediation and the Department of Environmental Protection (Department) to:

1. efficiently track the progress of all AOCs from identification to issuance of a final remediation document (i.e., Remedial Action Outcome (RAO), No Further Action letters (NFAs), etc.), in one easily identified section of the technical reports;
2. review a summary of the work completed and planned at each AOC; and
3. identify the current case status.

This tracking process allows for the snapshot review of remedial efforts.

Document:

Preparation of the Case Inventory Documents [pdf 43 Kb]
Version 1.1, issued 01/12/2011
http://www.nj.gov/dep/srp/guidance/srra/cid_guidance.pdf

Training Links on this topic: SRP Training - Preparation of the Case Inventory Documents

8. Public Notification Guidance

Brief Description of Document
The New Jersey Department of Environmental Protection (Department) adopted amendments to the Technical Requirements for Site Remediation (N.J.A.C. 7:26E) to require the person responsible for conducting the remediation of a contaminated site to perform public notification and outreach beginning at the onset of the remedial investigation phase. Amendments to N.J.A.C. 7:26E - 1.4 and 1.11 are published in the September 2, 2008 New Jersey Register. Minor amendments were also made to N.J.A.C. 7:26E 3.7, 4.1, 5.1, 8.2.

The Department has compiled a list of FAQs, and developed the following guidance to help remediation parties comply with the amendments:

Document: Public Notification & Outreach Guidance Page
http://www.nj.gov/dep/srp/guidance/public_notification/

Training Links on this topic: TBA

9. Requirement for Remedial Actions Rendering Properties "Unusable" [Draft]

Brief Description of Document
Under Section 47g (1) of the Site Remediation Reform Act, the department may disapprove the selection of a remedial action for a site on which the proposed remedial action will render the property unusable for future redevelopment or for recreational use.

Document: Requirement for Remedial Actions Rendering Properties "Unusable" [pdf 30 Kb]
Version 0.0 - DRAFT, issued 11/04/2009
http://www.nj.gov/dep/srp/guidance/srra/unusable_properties_draft.pdf

Training Links on this topic: TBA

10. Site Remediation Program's Electronic Data Interchange

Brief Description of Document
The Site Remediation Program (SRP) has developed this manual to help you submit your data to us electronically. The manual is designed to make it easier to submit your data and incorporate it into a data management system. This will help the SRP make more informed cleanup decisions, respond more accurately to questions and improve our ability to review your data more quickly and accurately.

Document: Site Remediation Program's Electronic Data Interchange Page
Version 1.0, issued 4/1999
http://www.nj.gov/dep/srp/guidance/srpedi/

Training Links on this topic: TBA

11. Soil Remediation Standards Guidance

Brief Description of Document
The Department has developed documents that will help remediating parties comply with the new soil remediation standards and with the development of alternative soil remediation standards:

Document: Soil Remediation Standards Guidance Documents Page
Originally issued June 2008
http://www.nj.gov/dep/srp/guidance/rs/

Training Links on this topic: TBA

12. Status of Administrative Consent Orders and Remediation Agreements

Brief Description of Document

Parties currently conducting remediation pursuant to an Administrative Consent Order (ACO) or a Remediation Agreement (RA) have asked for clarification regarding the status of their ACO/RA in light of the 2009 amendments to the Brownfield and Contaminated Site Remediation Act. N.J.S.A. 58:10B-1.3. This

notice is intended to provide that clarification

Document: Status of Administrative Consent Orders and Remediation Agreements
http://www.nj.gov/dep/srp/guidance/aco/

Status of Administrative Consent Orders and Remediation Agreements [pdf]

Training Links on this topic: TBA

13. Submission and Use of Data in GIS Compatible Formats Pursuant to Technical Requirements for Site Remediation

Brief Description of Document
NOTE: The SRRA Guidance matrix points to the same Web page for GIS Guidance as for this guidance item.

This guidance document is intended to clarify the relationship between the "Mapping and Digital Data Standards" (MDDS) criteria and practical issues associated with electronic submission of contaminated site remediation information called for in the requirements of N.J.A.C.7:26E. The goals of this guidance are to ensure swift, uncomplicated integration of digital map submissions with the SRP's existing GIS databases.

Document: GIS Guidance Page
http://www.nj.gov/dep/srp/gis/

Training Links on this topic: TBA

14. Well Search Guidance

Brief Description of Document
Summarizes a Department Data Miner query that serves as an electronic search for all wells within ½ and 1 mile of points of contamination as defined by N.J.A.C. 7:26E-1.17. The search is appropriate for CEA biennial certifications and initial evaluations. Refers users to additional guidance to help reduce the number of wells initially under consideration for sampling to just those which are likely to be impacted by contamination.

Document: Well Search Guidance (via CEA Compliance Page)
http://www.nj.gov/dep/srp/guidance/ceacompliance/

Training Links on this topic: TBA

4. Permits

1. NJPDES Discharges to Ground Water Technical Manual for the Site Remediation Program

Brief Description of Document
The purpose of this document is to provide guidance for implementing the New Jersey Pollutant Discharge Elimination System - Discharge to Ground Water (NJPDES-DGW) regulations at contaminated sites, as defined in the Administrative Requirements for the Remediation of Contaminated Sites, N.J.A.C. 7:26C (the ARRCS Rules) and/or at sites subject to the Technical Requirements for Site Remediation, N.J.A.C. 7:26E (the Technical Rules). This document has not been updated to reflect rule changes adopted after June 2007. Regulatory citations currently applicable to the DGW Permit-by-rule provisions discussed in this manual are in the NJPDES rule at N.J.A.C. 7:14A-7.5(a) and (b) and 8.5 and in the Technical Rules at N.J.A.C. 7:26E-2.1(a)17, 3.7(c)2, 6.4 (d)3, and 7.2. N.J.A.C. 7:26E-7.2 requires submittal of a DGW Proposal which is defined at N.J.A.C. 7:26E-1.8.

Document: NJPDES Discharges to Ground Water Technical Manual for the Site Remediation Program
Issued June 2007
http://www.nj.gov/dep/srp/guidance/njpdes/

Training Links on this topic: TBA

2. Remedial Action Permit for Ground Water

Brief Description of Document
This guidance is developed to assist the Licensed Site Remediation Professional in determining when and if a Remedial Action Permit is needed. This guidance is not intended to supersede any rule or regulation.

Document: Remedial Action Permit for Ground Water [pdf 157 Kb]
Version 0.0 - DRAFT, issued 02/24/2011
http://www.nj.gov/dep/srp/guidance/srra/draft_rem_action_permit_guidance_gw.pdf

Training Links on this topic: TBA

3. Remedial Action Permit for Soils

Brief Description of Document
This guidance is developed to assist the Licensed Site Remediation Professional in determining when and if a Remedial Action Permit is needed. This guidance is not intended to supersede any rule or regulation.

Document: Remedial Action Permit for Soils [pdf 87 Kb]
Version 0.0 - DRAFT, issued 02/24/2011
http://www.nj.gov/dep/srp/guidance/srra/draft_rem_action_permit_guidance_soils.pdf

Training Links on this topic: TBA