



west virginia department of environmental protection

Division of Water and Waste Management
601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0470
Fax: (304) 926-0488

Harold D. Ward, Cabinet Secretary
dep.wv.gov

**CONSENT ORDER
ISSUED UNDER THE
HAZARDOUS WASTE MANAGEMENT ACT
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 18**

TO: Arclin Amines LLC
Attn.: Alichia Hunt, Plant Manager
901 W. Dupont Avenue
Belle, WV 25015

DATE: August 21, 2025

ORDER NO.: HW-25-004

INTRODUCTION

This Consent Order is issued by the Director of the Division of Water and Waste Management (hereinafter “Director”), under the authority of West Virginia Code 22-18-1 et seq. to Arclin Amines LLC (hereinafter, “Arclin”).

FINDINGS OF FACT

In support of this Order, the Director hereby finds the following:

1. Arclin operates a chemical manufacturing facility located in Belle, Kanawha County, West Virginia and has been assigned EPA ID No. WVR000548222.
2. On August 6, 2024, West Virginia Department of Environmental Protection (WVDEP) received a WVDEP Spill Line report regarding the release of dimethylformamide (DMF) to the environment. On August 8, 2024, a focused compliance inspection (FCI) was conducted. The leak occurred when a transfer line was pressurized. The company investigation determined that a valve had been inadvertently left open and a pressure relief device had been installed improperly, which allowed the material to escape.
3. On March 12, 2025, WVDEP received a WVDEP Spill Line report regarding the release of DMF to the environment. An FCI was conducted that day. The cause of the release was the failure of a gasket due to thermal expansion of material trapped in a transfer line.

Promoting a healthy environment.

The following violation of the following section of Code of Federal Regulations was observed and documented:

- a. 40 CFR 262.16(b)(8)(i) – Arclin failed to operate to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the environment.

As a result of the aforementioned violation, Notice of Violation (NOV) No. 2503-583 was issued to Arclin.

4. On both May 13, 2025 and July 17, 2025, WVDEP personnel and representatives of Arclin met to discuss the terms and conditions of this Order as well as Arclin's robust response to the unintended release of DMF.
5. On August 6, 2025, Arclin submitted a plan of corrective action (POCA) that outlined action items and completion dates concerning when Arclin had achieved compliance with all pertinent laws and rules. The POCA was subsequently approved by WVDEP personnel. As described in the approved POCA, Arclin has completed all actions to correct the aforementioned violations.

ORDER FOR COMPLIANCE

Now, therefore, in accordance with West Virginia State Code 22-18-1 et seq., it is hereby agreed between the parties, and ORDERED by the Director:

1. Arclin shall immediately take all measures to initiate compliance with all pertinent laws and rules.
2. Because of Arclin's Code of Federal Regulations and West Virginia Code violations, Arclin shall be assessed a civil administrative penalty of three thousand six hundred thirty dollars (\$3,630) to be paid to the West Virginia Department of Environmental Protection for deposit in the Hazardous Waste Management Fund within thirty (30) days of the effective date of this Order. Payments made pursuant to this paragraph are not tax-deductible for purposes of State or federal law. **Payment shall include a reference to the Order No. and shall be mailed to:**

**Chief Inspector
Environmental Enforcement – Mail Code #031328
WVDEP
601 57th Street SE
Charleston, WV 25304**

OTHER PROVISIONS

1. Arclin hereby waives its right to appeal this Order under the provisions of West Virginia State Code 22-18-20. Under this Order, Arclin agrees to take all actions required by the terms and conditions of this Order and consents to and will not contest the Director's jurisdiction regarding this Order. However, Arclin does not admit to any factual and legal determinations made by the Director and reserves all rights and defenses available regarding liability or responsibility in any proceedings regarding Arclin other than proceedings, administrative or civil, to enforce this Order.
2. The Director reserves the right to take further action if compliance with the terms and conditions of this Order does not adequately address the violations noted herein and reserves all rights and defenses which he may have pursuant to any legal authority, as well as the right to raise, as a basis for supporting such legal authority or defenses, facts other than those contained in the Findings of Fact.
3. If any event occurs which causes delay in the achievement of the requirements of this Order, Arclin shall have the burden of proving that the delay was caused by circumstances beyond its reasonable control which could not have been overcome by due diligence (i.e., force majeure). Force majeure shall not include delays caused or contributed to by the lack of sufficient funding. Within three (3) working days after Arclin becomes aware of such a delay, notification shall be provided to the Director/Chief Inspector and Arclin shall, within ten (10) working days of initial notification, submit a detailed written explanation of the anticipated length and cause of the delay, the measures taken and/or to be taken to prevent or minimize the delay, and a timetable by which Arclin intends to implement these measures. If the Director agrees that the delay has been or will be caused by circumstances beyond the reasonable control of Arclin (i.e., force majeure), the time for performance hereunder shall be extended for a period of time equal to the delay resulting from such circumstances. A force majeure amendment granted by the Director shall be considered a binding extension of this Order and of the requirements herein. The determination of the Director shall be final and not subject to appeal.
4. Compliance with the terms and conditions of this Order shall not in any way be construed as relieving Arclin of the obligation to comply with any applicable law, permit, other order, or any other requirement otherwise applicable. Violations of the terms and conditions of this Order may subject Arclin to additional penalties and injunctive relief in accordance with the applicable law.
5. The provisions of this Order are severable and should a court or board of competent jurisdiction declare any provisions to be invalid or unenforceable, all other provisions shall remain in full force and effect.
6. This Order is binding on Arclin, its successors and assigns.
7. This Order shall terminate upon Arclin's notification of full compliance with the "Order for Compliance" and verification of this notification by WVDEP.

Alicha Hunt
Alicha Hunt, Plant Manager
Arclin Amines LLC

9/2/2025
Date

Public Notice begin:

Date

Public Notice end:

Date

Jeremy W. Bandy, Director
Division of Water and Waste Management

Date



August 8, 2024 – The truck loading rack where the August 6, 2024 DMF leak occurred.



August 8, 2024 – The terminal end of the DMF line that leaked on August 6, 2024. It is the line in the middle of the three.



March 12, 2025 – The area of the March 12, 2025 DMF release, underneath the load piping downstream of the S-102 DMF tank.



Sent Via Email: samantha.n.blair@wv.gov
joe.m.sizemore@wv.gov
john.d.killian@wv.gov

Certified Mail: 7019 2970 0000 3926 2746

August 6, 2025

Ms. Samantha Blair
Environmental Inspector Specialist, Environmental Enforcement
Mr. Joseph Sizemore
Assistant Chief Inspector, Environmental Enforcement -HW/UST/AST
Mr. John Killian
Environmental Inspector Supervisor, Environmental Enforcement – Hazardous Waste

West Virginia Department of Environmental Protection
Environmental Enforcement
Hazardous Waste
601 57th Street SE
Charleston, WV 25304

RE: Plan of Corrective Action (POCA)
Draft Consent Order No.: HW-25-004
NOV no. 2503-583
Arclin Amines
Belle, West Virginia
US EPA ID Number: WVR00054822

Dear Ms. Blair and Mr. Sizemore;

Arclin Amines (Arclin) hereby submits the Plan of Corrective Action (POCA) associated to the alleged violation included in the draft Consent Order (CO) and Notice of Violation (NOV) cited above. We thank you for considering the additional information provided during informal meetings held on May 13th and July 17th, 2025 and rescindment of alleged violation number 2 within the NOV, confirming that Arclin did not require a permit for disposal of non-hazardous spill residue.

Plan of Corrective Action (POCA) and Closure

Arclin immediately shut down system upon discovery and immediately initiated and closed corrective measures. We understand the regulation only requires corrective actions, however, we included preventive measures to avoid reoccurrence after a robust incident investigation. Corrective and preventive measures, along with their closure dates are as follows:

Corrective Actions:

1. System shutdown upon discovery, March 12, 2025
2. Replaced gasket in accordance with piping code, March 13, 2025
3. Cleanup of impacted soil for off-site disposal as non-hazardous waste, March 13, 2025



Preventive Actions:

1. Replaced associated valve, April 1, 2025
2. Reviewed incident during April 2025 safety meetings with site employees, April 10 - 11, 2025
3. Revised seven site procedures associated to dimethylformamide (DMF) management to include warnings or additional preventive measures and trained affected personnel. Training was completed on the procedures on June 12, 2025.
4. Designed and installed a thermal expansion relief valve, routed to a safe location for the subject piping, July 16, 2025.

Evidence of closure of these items is provided as **Attachment 1**.

Based on the evidence provided, Arclin understands that the required corrective measures are closed and no further action is required.

If you have any questions or comments, feel free to call me at (304) 513-0202 or Michael Hodge of my staff at (681-254-8667).

Cordially,

Alichia Hunt
Operations Manager
alicha.hunt@arclin.com

cc e-mail: Chad Longanacre, Environmental Inspector, WVDEP -EE/HW
Cindy Blugerman, WVDEP -EE
Matthew Smith, WVDEP-EE/HW
Rosa Pares, Arclin



ATTACHMENT



Attachment 1 – Corrective and Preventive Action Closure Evidence

- Waste Characterization Results
- April 2025 Safety Meeting Attendance sheets for incident discussion
- Off-Site Disposal Bill of Lading
- Work Orders for flange and valve repairs
- Training on Revised Operating Procedures
- Confirmation email of installation of new piping and pressure relief



WASTE CHARACTERIZATION

Pace Analytical Services, LLC
225 Industrial Park RD
Beaver, WV 25813
(800)999-0105

March 28, 2025

Michael Hodge
ARCLIN-BELLE
901 W. Dupont Avenue
Belle, WV 25015

RE: Project: DMF SPILL CLEANUP 3/19
Pace Project No.: 30765406

Dear Michael Hodge:

Enclosed are the analytical results for sample(s) received by the laboratory on March 20, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Beaver

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Beth Johnson
beth.johnson@pacelabs.com
(800)999-0105
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.



CERTIFICATIONS

Project: DMF SPILL CLEANUP 3/19

Pace Project No.: 30765406

Pace Analytical Services Beaver

225 Industrial Park Road, Beaver, WV 25813

New York DOH Lab ID12167 SN69208

Virginia VELAP 460148

West Virginia DEP 060

West Virginia DHHR 00412CM

North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: DMF SPILL CLEANUP 3/19
Pace Project No.: 30765406

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30765406001	DMF SPILL CLEANUP - GRAVEL	Solid	03/19/25 10:00	03/20/25 15:50

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SAMPLE ANALYTE COUNT

Project: DMF SPILL CLEANUP 3/19

Pace Project No.: 30765406

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30765406001	DMF SPILL CLEANUP - GRAVEL	ASTM D92	BT1	1

PASI-BV = Pace Analytical Services - Beaver

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: DMF SPILL CLEANUP 3/19
Pace Project No.: 30765406

Method: ASTM D92
Description: Flashpoint, Open Cup
Client: ARCLIN-BELLE
Date: March 28, 2025

General Information:

1 sample was analyzed for ASTM D92 by Pace Analytical Services Beaver. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 735274

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- DMF SPILL CLEANUP - GRAVEL (Lab ID: 30765406001)
- Flashpoint

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DMF SPILL CLEANUP 3/19

Pace Project No.: 30765406

Sample: DMF SPILL CLEANUP - GRAVEL Lab ID: 30765406001 Collected: 03/19/25 10:00 Received: 03/20/25 15:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Flashpoint, Open Cup	Analytical Method: ASTM D92 Pace Analytical Services - Beaver								
Flashpoint	>244	deg F	1.0	1.0	1		03/26/25 10:26		N2

REPORT OF LABORATORY ANALYSIS

Date: 03/28/2025 11:27 AM

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QUALIFIERS

Project: DMF SPILL CLEANUP 3/19

Pace Project No.: 30765406

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DMF SPILL CLEANUP 3/19

Pace Project No.: 30765406

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30765406001	DMF SPILL CLEANUP - GRAVEL	ASTM D92	735274		

REPORT OF LABORATORY ANALYSIS

Date: 03/28/2025 11:27 AM

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Pace® Location Requested (City/State): **CHAM-OF-CUSTODY Analytical Request Document**

Chain-of-Custody is a LEGAL DOCUMENT. Complete all relevant fields.

Contact/Report To: _____

Phone #: _____

E-Mail: _____

CC E-Mail: _____

Invoice to: _____

Invoice E-Mail: _____

Purchase Order # (if applicable): _____

Quote #: _____

Country / State of sample(s): _____

Time Zone Collected: [] AK [] PT [] MT [] CT [] ET

Regulatory Program (DW, RCRA, etc.) as applicable: _____

Data Deliverables:

[] Level II [] Level III [] Level IV

[] EQUUS

[] Other: _____

Site Collection Info/Facility ID (as applicable): _____

Rush (Pre-approval required):

[] Same Day [] 1 Day [] 2 Day [] 3 Day Other: _____

Date Received: _____

Requested: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Solid (S), Oil (OL), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Crank (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **

Identify Container Preservation Type ***

Analysis Requested

Probi Mgr:

AcetNum / Client ID:

Table #:

Prefix / Template:

Preslog / Bottle Ord. ID:

Sample Comment:

Lab Use Only

Preservation non-conformance identified for sample:

36765406

Scan QR Code for instructions

Received by Pace Greensburg

Therm ID 22 Corr Factor +/- 0

Receipt Temp 18

Corrected Temp 18

Correct Preservation DN

Res. Chlorine - Y/N - Lot# ---

Rad Samples Screened <0.05 urem/hr DN

Survey Meter 35017380

Additional Instructions from Pace®:

Collected By: _____

Printed Name: _____

Signature: _____

Received by: _____

Date/Time: 3/11/15 15:00

Received by Company: _____

Date/Time: _____

Received by Company: _____

Date/Time: _____

Received by Company: _____

Date/Time: _____

Customer Remarks / Special Conditions / Possible Hazards:

Thermometer ID: _____

Corrected Factor (°C): _____

Obs. Temp. (°C): _____

Corrected Temp. (°C): _____

On Ice: [] On Ice

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at <https://www.pacelabs.com/resources/library/resources/pace-terms-and-conditions/>

WO#: 30765406

PM: BHO

Due Date: 04/04/25

CLIENT: BV-ARGENTEL

LIMS30 Lab Sample Condition Upon Receipt (West Virginia)

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ 3rd Party Courier ☒ Pace ☐ Other _____

Tracking #: _____

Custody Seal on Cooler/Box/Containers Present: ☐ yes ☒ no

Seals Intact: ☐ yes ☒ no

Thermometer Used _____

Type of Ice: Wet Blue None

Cooler Temperature _____

Observed Temp: 24

8 °C

Correction Factor: 0.0 °C

Final Temp: 8 °C

Thermal Preservation Requirement Met Yes ☒ No ☐

pH paper Lot#

204584

Date and Initials of person examining

contents: RC 3121125

	Yes	No	N/A	
Chain of Custody Present:	\			1.
Chain of Custody Filled Out:	\			2.
Chain of Custody Relinquished:	\			3.
Sampler Name & Signature on COC:	\			4.
Sample Labels match COC:	\			5.
-Includes date/time/ID				
Matrix: <u>SL</u>				
Samples Arrived within Hold Time:	\			6.
Short Hold Time Analysis (<72hr remaining):		\		7.
Rush Turn Around Time Requested:		\		8.
Sufficient Volume:	\			9.
Correct Containers Used:	\			10.
-Pace Containers Used:	\			
Containers Intact:	\			11.
Orthophosphate field filtered:			\	12.
Hex Cr Aqueous sample field filtered:			\	13.
-pH adjusted within 24 hours? (If yes, indicate acid lot #)			\	
Filtered volume received for Dissolved tests:			\	14.
All containers have been checked for chemical preservation:			\	15.
exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix				
All containers meet method/chemical preservation requirements:			\	
Initial when completed: <u>RC</u>				
Date: <u>3-21-25</u>				
Tests not preserved:				
Headspace in VOA Vials:			\	16.
Trip Blank Present:			\	17.
Initial when completed: <u>RC</u>				
Date: <u>3-21-25</u> <u>3-21-25</u>				

Comments: _____

*PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen.



March 17, 2025

Michael Hodge
ARCLIN-BELLE
901 W. Dupont Avenue
Belle, WV 25015

RE: Project: DMF SPILL CLEANUP 2 GRAVEL
Pace Project No.: 30763769

Dear Michael Hodge:

Enclosed are the analytical results for sample(s) received by the laboratory on March 14, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Beaver

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Beth Johnson
beth.johnson@pacelabs.com
(800)999-0105
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
225 Industrial Park RD
Beaver, WV 25813
(800)999-0105

CERTIFICATIONS

Project: DMF SPILL CLEANUP 2 GRAVEL
Pace Project No.: 30763769

Pace Analytical Services Beaver

225 Industrial Park Road, Beaver, WV 25813
New York DOH Lab ID12167 SN69208
Virginia VELAP 460148
West Virginia DEP 060

West Virginia DHHR 00412CM
North Carolina DEQ 466
Kentucky Wastewater Certification KY90039
Pennsylvania DEP 68-00839

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SAMPLE SUMMARY

Project: DMF SPILL CLEANUP 2 GRAVEL

Pace Project No.: 30763769

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30763769001	DMF SPILL CLEANUP GRAVEL	Solid	03/14/25 09:00	03/14/25 16:00

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SAMPLE ANALYTE COUNT

Project: DMF SPILL CLEANUP 2 GRAVEL
Pace Project No.: 30763769

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30763769001	DMF SPILL CLEANUP GRAVEL	ASTM D92	BT1	1

PASI-BV = Pace Analytical Services - Beaver

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: DMF SPILL CLEANUP 2 GRAVEL
Pace Project No.: 30763769

Method: ASTM D92
Description: Flashpoint, Open Cup
Client: ARCLIN-BELLE
Date: March 17, 2025

General Information:

1 sample was analyzed for ASTM D92 by Pace Analytical Services Beaver. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 733190

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- DMF SPILL CLEANUP GRAVEL (Lab ID: 30763769001)
- Flashpoint

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: DMF SPILL CLEANUP 2 GRAVEL
Pace Project No.: 30763769

Sample: DMF SPILL CLEANUP GRAVEL Lab ID: 30763769001 Collected: 03/14/25 09:00 Received: 03/14/25 16:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Flashpoint, Open Cup	Analytical Method: ASTM D92 Pace Analytical Services - Beaver							
Flashpoint	>244	deg F	1.0	1		03/17/25 12:59		N2

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: DMF SPILL CLEANUP 2 GRAVEL
Pace Project No.: 30763769

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: DMF SPILL CLEANUP 2 GRAVEL
Pace Project No.: 30763769

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30763769001	DMF SPILL CLEANUP GRAVEL	ASTM D92	733190		

REPORT OF LABORATORY ANALYSIS

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LIMS30 Lab Sample Condition Upon Receipt (West Virginia)

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ 3rd Party Courier ☒ Pace ☐ Other

Tracking #:

Custody Seal on Cooler/Box/Containers Present: ☐ yes ☒ no

Seals Intact: ☐ yes ☒ no

Thermometer Used

M27

Type of Ice: Wet Blue None

Cooler Temperature

Observed Temp

1.4 °C

Correction Factor: 0 °C

Final Temp: 1.4 °C

Thermal Preservation Requirement Met Yes ☒ No ☐

pH paper Lot#

204524

Date and Initials of person examining

contents: 7C 3-14-25

	Yes	No	N/A	
Chain of Custody Present:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.
Sample Labels match COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
-Includes date/time/ID				
Matrix: <u>SC</u>				
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
Correct Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.
-Pace Containers Used:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.
Orthophosphate field filtered:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.
Hex Cr Aqueous sample field filtered:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.
-pH adjusted within 24 hours? (if yes, indicate acid lot #)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Filtered volume received for Dissolved tests:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.
All containers have been checked for chemical preservation:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.
exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix				
All containers meet method/chemical preservation requirements:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Initial when completed <u>7C</u> Date: <u>3-14-25</u>
Tests not preserved:				
Headspace in VOA Vials:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	16.
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.
				Initial when completed <u>7C</u> Date: <u>3-14-25</u>

Comments:

*PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen.

Hazardous Waste Base Penalty Calculation

(pursuant to 33CSR27-6.1)

Responsible Party:

Arclin Amines LLC

EPA ID Number:

WVR000548222

Generator Classification:

SQG

Enter FOF# and rate each finding as to Potential and Extent.

1)	Potential for Harm Factor	Factor Range	FOF#											
			3.a.											
a)	Harm to RCRA Program	1 to 3	2											
b)	Probability of Exposure	0 to 3	2											
c)	Potential Seriousness of Contamination	1 to 3	2											
	Average Potential for Harm Factor		2	No	No	No	No	No	No	No	No	No	No	No
2)	Extent of Deviation Factor	Factor Range												
	Degree of Non-Compliance	1 to 3	2											

Potential for Harm Factors

1a. - Harm to the RCRA Program

- All regulatory requirements are fundamental to the continued integrity of the RCRA Program
- Violations that undermine the statutory or regulatory purposes or procedures for implementing the RCRA program may have serious implications and merit substantial penalties. Examples include but are not limited to: failure to notify as a generator, failure to respond to an info request, failure to prepare or maintain a manifest, and operating / disposal without a permit

1b. - Probability of Exposure - factors to be considered include but are not limited to: evidence of a release, evidence of waste mismanagement, and adequacy of provisions for detecting and preventing a release

1c. - Potential Seriousness of Contamination - factors to consider include but are not limited to quantity and toxicity of wastes (potentially) released, likelihood or fact of transport by way of environmental media (e.g. air and groundwater), and existence, size and proximity of receptor populations (e.g. local residents, fish, wildlife) and sensitive environmental media (e.g. surface waters and aquifers.)

Note: Rate as 1 for Minor, 2 for Moderate and 3 for Major. Rate as 0 if it does not apply.

Continue rating Findings of Facts (FOF) here, if necessary. Otherwise, continue on Page 3.

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		Extent of Deviation from Requirement		
		Major	Moderate	Minor
Potential for Harm to Human Health	Major	\$10,000	\$6,000 to \$8,000	\$5,000 to \$6,000
	Moderate	\$5,000	\$3,000 to \$4,000	\$2,000 to \$3,000
	Minor	\$2,000	\$1,000 to \$1,500	Up to \$1,000

FOF #	Potential for Harm	Extent of Deviation	Penalty	Multiple Factor	Base Penalty
3.a.	Moderate	Moderate	\$4,000	1	\$4,000
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
0	FALSE	FALSE	FALSE	1	\$0
Total Base Penalty					\$4,000

Penalty Adjustment Factors

(pursuant to 33CSR27-6.2)

Penalty Adjustment Factors

6.2.b.1 - Good faith efforts to comply or lack of good faith - 10% decrease to 10% increase

6.2.b.2 - Degree of Willfulness and / or Negligence - 0% to 30% increase

6.2.b.3 - Cooperation with the Secretary - 0% to 10% decrease

6.2.b.4 - History of Non-Compliance - 0% to 100% increase -
based upon review of last three (3) years - Warning = maximum of 5% each,
N.O.V. = maximum of 10% each, previous Order = maximum of 25% each

6.2.b.5 - Ability to pay a civil administrative penalty - 0% to 100% decrease

6.2.b.6 - Economic Benefit of non-compliance

6.2.b.7 - Staff Investigative Costs

6.2.b.8 - Other relevant factors determined on a case-by-case basis

Base Penalty Adjustments

(pursuant to 33CSR27-6.2)

Penalty Adjustment Factor	% Increase	% Decrease	Adjustments
6.2.b.1 - Good Faith - Increase			\$0
6.2.b.1 - Good Faith - Decrease		10	(\$400)
6.2.b.2 - Willfulness and/or negligence	10		\$400
6.2.b.3 - Cooperation with the Secretary		10	(\$400)
6.2.b.4 - Compliance/noncompliance history			\$0
6.2.b.5 - Ability to Pay an Administrative Penalty			\$0
6.2.b.6 - Economic Benefit (flat monetary increase)	\$0		\$0
6.2.b.7 - Staff Investigative Costs (flat monetary increase)			\$0
6.2.b.8 - Additional Other Factors - Increase (flat monetary increase)			\$0
6.2.b.8 - Additional Other Factors - Decrease (flat monetary decrease)			\$0
Public Notice Cost (flat monetary increase)	\$30		\$30
Penalty Adjustments			(\$370)
Penalty =			\$3,630

Estimated Economic Benefit Item	Estimated Benefit (\$)
Monitoring & Reporting	
Installation & Maintenance of Pollution Control Equipment	
O&M expenses and cost of equipment/materials needed for compliance	
Permit Application or Modification	
Competitive Advantage	
Estimated Economic Benefit	\$0
Comments: Economic benefit not warranted.	