



Florida Department of Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

March 23, 2018

Sent electronically to: nicole.t.newell@chemours.com

Ms. Nicole T. Newell, Plant Manager
The Chemours Company FC, LLC
Post Office Box 753
Starke, Florida 32091

**RE: Warning Letter No. WL18-40
The Chemours Company FC, LLC
Facility ID Nos. FL0000035, FL0000051, FL0040274 and FL0435490
Clay, Bradford, Duval, and Baker Counties**

Dear Ms. Newell:

Compliance inspections were conducted by EPA and DEP personnel at your facilities between October 24, 2017 and October 26, 2017. Additional inspections were conducted by DEP personnel on January 25, February 28 and March 1, 2018. During these inspections, possible violations of Chapter 403, Florida Statutes (F.S.), and Chapters 62-620 and 62-660, Florida Administrative Code (Fla. Admin. Code), were observed.

During these site inspections and associated file reviews, EPA and Department personnel noted the following:

- A. The following were noted during the Records and Reports inspection:
1. Radium and hardness samples were not properly preserved.
 2. No sludge management plan developed for humate (Maxville and North Maxville).
 3. Site plan does not identify or provide sufficient maintenance and inspection procedures, complete Best Management Practices, training procedures, training schedules, or the signature of the current responsible party.
 4. Site plan has not been updated since it was implemented 2013.
 5. Site plan does not provide details on evaluating accumulated water in secondary containment structures prior to discharging.

6. Total Radium 226/Radium 228 at outfall D002 was not reported during the first quarter of 2017, as required by permit (Maxville).
 7. Toxicity results were not provided at outfall D002 for third quarter (Maxville).
 8. The lime treatment ponds associated with the long-term ponds and caustic pond are not included on the daily shift check sheet (Maxville).
 9. No written documentation of which outfalls are constructed, inactive or active (North Maxville).
 10. Inadequate inspection frequency of inactive ponds (North Maxville).
 11. A permit modification to include Twin Pines in the Industrial Wastewater permit was not obtained prior to beginning operation.
 12. Toxicity violations noted.
- B. The following were observed during the inspections of the industrial wastewater facilities associated with mining or formerly mined areas:
1. Lime spillage at storage silos (Trailridge and Highland).
 2. No documentation that all areas are draining toward the treatment system, including the wash water from the vehicle washing area, and stormwater from the equipment staging and chemical storage area.
 3. Secondary containment structures are pumped to the ground instead of to the treatment system.
 4. Collection ditches, silt fencing, borrow pits, and berms throughout the mines did not appear to be incorporated into the company's routine inspections.
 5. Twin Pines silt fences were overwhelmed with sand; process water and tailings fill deposited in a wetland without permit authorization. Area not being monitored or inspected.
 6. Some eroded berms observed (North Maxville).
 7. Significant amounts of material on the ground with some running off into the ditch (Highland).
 8. The borrow pit treatment system at the toe of the Trail Ridge treatment ponds appears not to be included in regular inspections, is not readily accessible, and has places along the railroad tracks where water has the potential to flow out of the permit boundary, possibly bypassing the NPDES outfall (Trail Ridge).

9. Brushy vegetation on dams of Trail Ridge treatment pond system does not allow visual inspection of dams that are actively used as part of the process water treatment system; large trees growing on dam walls could potentially affect dam integrity; water in borrow pits abuts the toe of the dam; some areas in the pond system may not have sufficient freeboard (Trail Ridge).
 10. The wooden stop gates at D001 are rotting and are not preventing discharge (North Maxville).
 11. Long term ponds may not have sufficient freeboard (Maxville).
 12. Alum, barium chloride and lime vessels are not in, or only partially surrounded by, secondary containment (Maxville).
 13. Lime buildup on secondary containment (Maxville).
 14. Road filling sediment not within secondary containment (Maxville).
 15. Leaky valve at D002 (Highland).
 16. Noted or potential discharges observed in the Highlands wastewater treatment area, the processing plant area, and the collection ditches.
 17. Stormwater runoff from laydown yard is not managed through an engineered stormwater system and enters wetlands without treatment; pipes are stored in wetlands that are not authorized for disturbance (North Maxville).
 18. Seepage is visible at toe of process water treatment ponds that is not captured and treated prior to discharge (e.g., Pond JD-9 at North Maxville).
- C. The following were observed during the inspections of the mining and reclamation areas:
1. Erosion gully repairs are needed in the reclamation areas on the east side of mine (North Maxville).
 2. Material discharge was observed from cell #72 and fill was deposited in a wetland not authorized for disturbance (North Maxville).
 3. Pond 8 appeared to be actively discharging but is not a permitted NPDES outfall; mine personnel stated that Ponds 1-9 are no longer receiving process water and have been reclaimed, however, no as-built drawings or request to transfer to operational phase have been received for these ponds (Highland).

The Chemours Company
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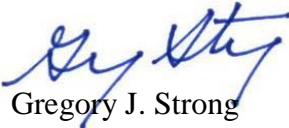
A copy of the EPA inspection report is attached.

Violations of Florida Statutes or administrative rules may result in liability for damages and restoration, and the judicial imposition of civil penalties, pursuant to chapter 403, Florida Statutes.

Please contact Heather Webber, at (904) 256-1622, within **15 days** of receipt of this Warning Letter to arrange a meeting to discuss this matter. The Department is interested in receiving any facts you may have that will assist in determining whether any violations have occurred. You may bring anyone with you to the meeting that you feel could help resolve this matter.

Please be advised that this Warning Letter is part of an agency investigation, preliminary to agency action in accordance with section 120.57(5), Florida Statutes. We look forward to your cooperation in completing the investigation and resolving this matter as soon as possible.

Sincerely,



Gregory J. Strong
District Director

Attachment(s): EPA inspection report(s)

ec: FDEP - Heather Webber, Hillary Saunders, Nick Williams, Herndon Sims,
FDEP Mining and Mitigation – Jessica Duke, Orlando Rivera, John A. Coates
Connie Henderson (connie.henderson@echemours.com)

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
WASTEWATER COMPLIANCE INSPECTION REPORT**

Facility Name and Physical Address Florida Mine – Trail Ridge 5222 Treat Road Starke, Florida 32091	WAFR ID FL0000051	County Bradford	Entry Date 10/24/2017	Entry Time 08:30 AM
	Facility Phone # (904) 964-1200		Exit Date 10/25/2017	Exit Time 6:15 PM

LAT	29	°	54	'	46.15	“
LONG	82	°	1	'	52.35	“

Name(s) of Field Representatives(s) and Title Connie Henderson, Environmental Mgr	Operator Certification # N/A	Email connie.henderson@chemours.com	Phone (904) 964-1327
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Name & Address of Permittee / Designated Rep. Nicole T. Newell PO Box 753 Starke, Florida 32091	Title Plant Manager	Email nicole.t.newell@chemours.com	Phone (904) 964-1220
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Inspection Type	C	E	I	Samples Taken(Y/N): N	Sample ID#: N/A	Samples Split (Y/N): N/A
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Domestic Industrial


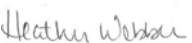
FACILITY COMPLIANCE AREAS EVALUATED

IC = In Compliance; MC = Minor Out of Compliance; NC = Out of Compliance; SC = Significant out of Compliance; NA = Not Applicable; NE = Not Evaluated
Significant Non-Compliance Criteria Should be Reviewed when Out of Compliance Ratings Are Given in Areas Marked by a “♦”

	PERMITS/ORDERS		SELF MONITORING PROGRAM		FACILITY OPERATIONS		EFFLUENT/DISPOSAL
IC	1. ♦ Permit	IC	3. Laboratory	NC	6. Facility Site Review	NC	9. ♦ Effluent Quality
IC	2. ♦ Compliance Schedules	NC	4. Sampling	NC	7. Flow Measurement	SC	10. ♦ Effluent Disposal
		NC	5. ♦ Records & Reports	NC	8. ♦ Operation & Maintenance	IC	11. Biosolids/Humate
						IC	12. Groundwater
NE	14. Other					NA	13. ♦ SSO Survey

Facility and/or Order Compliance Status:	<input type="checkbox"/> In-Compliance	<input type="checkbox"/> Out-Of -Compliance	<input checked="" type="checkbox"/> Significant-Out-Of-Compliance
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Recommended Actions: See ‘Corrective Action’ sections throughout report.

Name(s) and Signature(s) of Inspector(s) Herndon Sims 	District Office/Phone Number NED/(904) 256-1612	Date 3/12/2018
Name and Signature of Reviewer Heather Webber 	District Office/Phone Number NED/ (904) 256-1622	Date 3/16/2018

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
WASTEWATER COMPLIANCE INSPECTION REPORT**

Facility Name and Physical Address Florida Mine - Maxville 780 Highway 301 Maxville, FL 32234	WAFR ID FL0040274	County Clay	Entry Date 10/25/2017	Entry Time 09:10 AM
	Facility Phone # 904-964-1200		Exit Date 10/25/2017	Exit Time 4:05 PM

LAT	30	°	9	'	8.79	''
LONG	82	°	2	'	0.07	''

Name(s) of Field Representatives(s) and Title Connie Henderson	Operator Certification # N/A	Email Connie.henderson@chemours.com	Phone (904) 964-1327
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Name & Address of Permittee / Designated Rep. Nicole T. Newell Post Office Box 753 Starke, Florida 32091	Title Plant Manager	Email nicole.t.newell@chemours.com	Phone (904) 964-1220
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Inspection Type	C	E	I		Samples Taken(Y/N): N	Sample ID#: N/A	Samples Split (Y/N): N/A
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Domestic Industrial

FACILITY COMPLIANCE AREAS EVALUATED

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Significant Non-Compliance Criteria Should be Reviewed when Out of Compliance Ratings Are Given in Areas Marked by a "♦"

	PERMITS/ORDERS		SELF MONITORING PROGRAM		FACILITY OPERATIONS		EFFLUENT/DISPOSAL
IC	1. ♦ Permit	IC	3. Laboratory	NC	6. Facility Site Review	NC	9. ♦ Effluent Quality
IC	2. ♦ Compliance Schedules	NC	4. Sampling	IC	7. Flow Measurement	SC	10. ♦ Effluent Disposal
		NC	5. ♦ Records & Reports	NC	8. ♦ Operation & Maintenance	IC	11. Biosolids/Humate
						IC	12. Groundwater
NE	14. Other					NA	13. ♦ SSO Survey

Facility and/or Order Compliance Status:	<input type="checkbox"/> In-Compliance	<input type="checkbox"/> Out-Of -Compliance	<input checked="" type="checkbox"/> Significant-Out-Of-Compliance
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Recommended Actions: See 'Corrective Action' sections throughout report.

Name(s) and Signature(s) of Inspector(s) Hillary Saunders <i>Hillary Saunders</i>	District Office/Phone Number NED/ (904) 256-1549	Date 3/6/2018
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Name and Signature of Reviewer Herndon Sims <i>Herndon Sims</i>	District Office/Phone Number NED/ (904) 256-1632	Date 3/12/2018
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WASTEWATER COMPLIANCE INSPECTION REPORT

Facility Name and Physical Address Florida Mine - North Maxville 7775 South County Road 228 Macclenny, Florida 32063	WAFR ID FL0435490	County Baker	Entry Date 10/26/2017	Entry Time 8:35 AM
	Facility Phone # (904) 964-1200		Exit Date 10/26/2017	Exit Time 5:05 PM

LAT	30	°	12	'	32.9	“
LONG	82	°	4	'	14.7	“

Name(s) of Field Representatives(s) and Title Connie Henderson, Environmental Mgr.	Operator Certification # N/A	Email connie.henderson@chemours.com	Phone (904) 964-1327
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Name & Address of Permittee / Designated Rep. Nicole T. Newell Post Office Box 753 Starke, Florida 32091	Title Plant Manager	Email nicole.t.newell@chemours.com	Phone (904) 964-1200
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Inspection Type	C	E	I		Samples Taken(Y/N): N	Sample ID#: N/A	Samples Split (Y/N): N/A
<input type="checkbox"/> Domestic <input checked="" type="checkbox"/> Industrial							

FACILITY COMPLIANCE AREAS EVALUATED							
IC = In Compliance; MC = Minor Out of Compliance; NC = Out of Compliance; SC = Significant out of Compliance; NA = Not Applicable; NE = Not Evaluated Significant Non-Compliance Criteria Should be Reviewed when Out of Compliance Ratings Are Given in Areas Marked by a “♦”							
	PERMITS/ORDERS		SELF MONITORING PROGRAM		FACILITY OPERATIONS		EFFLUENT/DISPOSAL
IC	1. ♦ Permit	IC	3. Laboratory	NC	6. Facility Site Review	NC	9. ♦ Effluent Quality
IC	2. ♦ Compliance Schedules	NC	4. Sampling	IC	7. Flow Measurement	SC	10. ♦ Effluent Disposal
		NC	5. ♦ Records & Reports	NC	8. ♦ Operation & Maintenance	IC	11. Biosolids/Humate
						IC	12. Groundwater
NE	14. Other					NA	13. ♦ SSO Survey

Facility and/or Order Compliance Status:	<input type="checkbox"/> In-Compliance	<input type="checkbox"/> Out-Of -Compliance	; Significant-Out-Of-Compliance
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Recommended Actions: See ‘Corrective Action’ sections throughout report.

Name and Signature of Inspector Nick Williams 	District Office/Phone Number NED/ (904) 256-1608	Date 3/6/2018
Name and Signature of Reviewer Herndon Sims 	District Office/Phone Number NED/ (904) 256-1612	Date 3/12/2018

Facility Name and Physical Address Florida Mine - Highland 274 NE County Road 125 Lawtey, Florida 32058	WAFR ID FL0000035	County Clay	Entry Date 10/26/2017	Entry Time 8:30 AM
	Facility Phone # (904) 964-1200		Exit Date 10/26/2017	Exit Time 5:15 PM

LAT	30	°	3	'	21.2	''
LONG	82	°	2	'	58.1	''

Name of Field Representatives and Title Connie Henderson, Environmental Mgr.	Operator Certification # N/A	Email connie.henderson@chemours.com	Phone (904) 964-1327
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Name & Address of Permittee / Designated Rep. Nicole T. Newell Post Office Box 753 Starke, Florida 32091	Title Plant Manager	Email nicole.t.newell@chemours.com	Phone (904) 964-1200
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Inspection Type	C	E	I		Samples Taken(Y/N): N	Sample ID#: N/A	Samples Split (Y/N): N/A
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<input type="checkbox"/> Domestic	<input checked="" type="checkbox"/> Industrial
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FACILITY COMPLIANCE AREAS EVALUATED							
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IC	1. ♦ Permit	IC	3. Laboratory	NC	6. Facility Site Review	NC	9. ♦ Effluent Quality
NA	2. ♦ Compliance Schedules	NC	4. Sampling	IC	7. Flow Measurement	SC	10. ♦ Effluent Disposal
		NC	5. ♦ Records & Reports	NC	8. ♦ Operation & Maintenance	IC	11. Biosolids/Humate
						IC	12. Groundwater
NE	14. Other					NA	13. ♦ SSO Survey

Facility and/or Order Compliance Status:	<input type="checkbox"/> In-Compliance	<input type="checkbox"/> Out-Of -Compliance	; Significant-Out-Of-Compliance
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Recommended Actions: See 'Corrective Action' sections throughout report.

Name and Signature of Inspector Nick Williams 	District Office/Phone Number NED/ (904) 256-1608	Date 3/6/2018
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Name and Signature of Reviewer Herndon Sims 	District Office/Phone Number NED/ (904) 256-1612	Date 3/12/2018
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Single Event Violations

Check for Yes	Evaluation Area	Description	Finding Description	Finding ID
<input type="checkbox"/>	Effluent Disposal	General	Operation of unpermitted disposal system at a permitted facility.	EDUN
<input type="checkbox"/>	Laboratory	General	The laboratory is not certified by the Department of Health.	LNCE
<input type="checkbox"/>	Permit	General	Unauthorized discharge from the collection system with a high potential for water quality or health impacts	UNBP
<input type="checkbox"/>	Permit	General	The facility is operating without a wastewater permit.	UPHI
<input type="checkbox"/>	Records and Reports	General	Falsification of any record or report	FARR
<input type="checkbox"/>	Records and Reports	General	The Permittee failed to report noncompliance to the Department within 24 hours as required by 62-620.610(20), F.A.C.	RSWP

Trail Ridge Facility Treatment Summary: This heavy minerals mining wastewater treatment system provides acidification with ferric chloride, sulfuric acid, aluminum sulfate, or ferric sulfate to a pH between 3.0 and 3.5 standard units for flocculation of colloidal material followed by settling in a series of diked ponds, neutralization with hydrated lime to a pH between 6.0 to 8.5, and additional settling with final discharge to Alligator Creek (D001). Polymer addition may be provided after neutralization for aluminum reduction prior to final discharge at D-001. Storm water and rainfall from the mined areas are also collected and treated as described above. The treatment train consists of the addition of barium chloride to the wastewater at the location where ferric chloride, aluminum sulfate and/or ferric sulfate is added (prior to the humate settling ponds). A portion of the effluent is directed to the Southwest Quadrant Pond. The existing recycle line from D-001 was tapped and a pipeline was constructed to route approximately 400 gallons per minute (gpm) of the treated wastewater to an existing ditch which then discharges into the Southwest Quadrant Pond (location D-002) with eventual discharge into Blue Pond. This rerouting of final effluent is the result of an effort by The Keystone Stakeholders to help improve lake water levels in the Keystone Heights area.

Maxville Facility Treatment Summary: A 4.0 MGD AADF heavy minerals mining wastewater treatment system providing acidification with ferric chloride, sulfuric acid, aluminum sulfate, barium chloride, or ferric sulfate to a pH between 3.0 to 3.5 standard units, for flocculation of colloidal material. There is an additional step in the dredge pond to precipitate humates using ferric chloride, alum and/or polymer.

North Maxville Facility Treatment Summary: 5-million gallon per day (MGD) maximum daily flow heavy mineral mining wastewater treatment system. Process water from the dredge mining operation will be collected in humate settling ponds that will be constructed as the mining progresses. Stormwater from mining areas and overflow from the humate settling ponds will be collected and treated in a set of polishing ponds in series to meet water quality standards prior to discharge through the outfall. Barium chloride may be added as needed to assure that radium levels will not be exceeded. There will be a total of 9 sets of polishing ponds with 9 outfalls due to the progressive nature of the mining operation. Each set of ponds will be constructed as needed as the footprint of the mine progresses. Ponds that are no longer in use will be properly decommissioned and closed. Three of the nine outfalls will discharge effluent into wetland areas that eventually discharge into Turkey Creek, Class III fresh water. The other six outfalls will discharge effluent into wetland areas that eventually discharge into Deep Creek, Class III fresh water.

Highland Facility Treatment Summary: This is a heavy minerals mining wastewater treatment system providing acidification with ferric chloride, sulfuric acid, aluminum sulfate or ferric sulfate to a pH between 3.0 and 3.5 standard units, for flocculation of colloidal material, followed by settling in a series of diked ponds, neutralization with hydrated lime to a pH of between 6.0 and 8.5 standard units, and additional settling with final discharge to the north (Outfall D-002) arm of Boggy Branch, a Class III fresh water of the state. Wastewater is generated from the dry mill operation and stormwater runoff from mining areas. Upon Department approval, polymer addition may be provided after neutralization for aluminum reduction prior to final discharge to the North Arm of Boggy Branch. A portion of the connector ditch for the current outfall D-002 will continue to serve as the seepage collection and recycle system.

1. A. Trail Ridge Permit: In-Compliance

Current Permit available on-site?	Yes
Date Permit issued	06/29/2017
Date Permit Expires	06/28/2022
Permit Renewal Application due by	12/28/2021
Administrative or Judicial Orders?	Administrative Order 185 for total recoverable iron

1. B. Maxville Permit: In-Compliance

Current Permit available on-site?	Yes
Date Permit issued	March 14, 2017
Date Permit Expires	March 13, 2022
Permit Renewal Application due by	September 14, 2021
Administrative or Judicial Orders?	Consent Order

1. C. North Maxville Permit: In-Compliance

Current Permit available on-site?	Yes
Date Permit issued	May 15, 2016
Date Permit Expires	May 14, 2021
Permit Renewal Application due by	November 15, 2020
Administrative or Judicial Orders?	N/A

1. D. Highland Permit: In-Compliance

Current Permit available on-site?	Yes
Date Permit issued	August 26, 2016
Date Permit Expires	September 25, 2021
Permit Renewal Application due by	March 29, 2021
Administrative or Judicial Orders?	N/A

2. A. Trail Ridge Compliance Schedules: In-Compliance

Compliance Schedule in Permit met?	Yes
Compliance Schedules in Order are being met?	Yes

Improvement Action	Date Due
Continue implementing existing BMP plan for West Ridge Area	Issuance date of permit
Conduct an inspection and provide a report reviewing the system that conveys flow from the basin WBID# 2421 to basin WBID# 3606. Submit a report to the Department to confirm the normal function of the system.	November 1, 2018
Conduct an inspection and provide a report reviewing the system that conveys flow from the basin WBID# 2421 to basin WBID# 3606. Submit a report to the Department to confirm the normal function of the system.	November 1, 2020

AO 185 Schedule:

A

ACTION ITEM	DUE DATE
Implement Phase 1 of the Improvement Plan and Status Report	Commence implementation of Phase 1-effective date of the permit. Progress report due December 29, 2017 – Submitted
Implement Phase 2 of the Improvement Plan and Status Report	Commence implementation of Phase 2 of the Improvement Plan and Status Report, no more than 18 months after the effective date of the permit (or 12 months, if results do not show any improvement).
Bring the concentration of the total recoverable iron at D-001 into compliance with the final permit limits	No later than 4 years from the effective date of the Permit.

2. B. Maxville Compliance Schedules: In-Compliance

Compliance Schedule in Permit met?	Not Applicable
Compliance Schedules in Order are being met?	Yes

Improvement Action	Date Due
Continue Implementing existing BMP plan	Issuance date of permit
Continue groundwater sampling plan for the long-term pond as well as review of groundwater modeling analysis.	At 6 months from permit issuance, and every 6 months for the duration of the permit, submit a progress report.

CO 16-1402 Schedule:

Improvement Action	Date Due	Date Completed
Submit Plan of Study (POS) for assessment of legacy solids to determine if they represent an on-going source for the release of radionuclides to groundwater	August 18, 2017	August 7, 2017

Submit final report of Legacy Solids Assessment	6 months after Department approval of POS	Not due yet
Submit plan for corrective measures	6 months after Department receipt of Final Legacy Solids Assessment	Not due yet
Continuation of radionuclide delineation assessment with interpretive report by Florida registered PG or PE	Semi-annual report submittals (April and October) for duration of CO	April 19, 2017

2. C. North Maxville Compliance Schedules: In-Compliance

Compliance Schedule in Permit met?	Yes
Compliance Schedules in Order are being met?	Not Applicable

Improvement Action	Completion Due Date	Completed
The new monitoring wells described in Permit Condition III.9 shall be installed.	August 15, 2016	February 27, 2015
Well Completion Reports shall be submitted for the new monitoring wells in accordance with Permit Condition III.3.	September 15, 2016	February 27, 2015
Sampling of the new monitoring wells (Permit Condition III.10) shall begin within the 3 rd calendar quarter of 2016, with data submitted by October 28, 2016.	September 30, 2016	February 27, 2015

2. D. Highlands Compliance Schedules: Not Applicable

3. Laboratory: In-Compliance

Lab Name and Certification#	TRAC E81181
Lab Name and Certification #	Pace Analytical E83079
Lab Name and Certification #	Florida Radiochemistry E83033

Observation: The in-house laboratory is used for monitoring process control.

4. Sampling: Out-of-Compliance

Sampling conducted during inspection?	No
Sampling observed during inspection?	No
Sampling conducted at locations identified by the permit?	Yes
Safe access to sampling locations?	Yes

Deficiency: Chain of Custody documents were available and reviewed. Based on the review Radium and Hardness samples were not being properly preserved with HN03.

Rule/Permit Reference: Permit Condition IX

Corrective Action: Review preservation requirements for collecting samples and ensure DEP Laboratory SOP is followed for proper sample collection.

Observation: The composite samplers appear to be in satisfactory operating condition.

Observation: pH Buffers 4, 7 and 10 were within the expiration dates.

Observation: The collected samples hold times were not exceeded.

5. Records and Reports: Out-of-Compliance

Documents/Records reviewed	Timeframe
Discharge Monitoring Reports (DMRs)	03/01/2016 to 08/31/2017

Deficiency: Common findings observed during inspection of mining facilities:

- o No sludge management plan developed for humate (Maxville and North Maxville).
- o Site plan does not identify/provide maintenance and inspection procedures for BMP other than ponds.
- o Site plan has not been updated since it was implemented 2013.
- o Site plan does not provide details on evaluating accumulated water in secondary containment structures prior to discharging.
- o Total Radium 226/Radium 228 at outfall D002 was not reported the 1st Qtr 2017 as required by permit (Maxville).
- o Toxicity results were not provided at outfall D002 for 3rd Qtr (Maxville).
- o The lime treatment ponds associated with the long-term ponds and caustic pond are not included on the daily shift check sheet at Maxville.
- o No written documentation of which outfalls at North Maxville are constructed, inactive or active.
- o Inspection frequency of inactive ponds at North Maxville does not appear to be adequate.
- o Twin Pines area needs to be added to IW permit – to include monitoring & inspecting requirements.

The Plan should also include:

- o Details of the erosion and sediment control measures and/or structural measures (aside from settling ponds) used for the management of wastewater and stormwater runoff.
- o Identification and location of collection ditches, berms, and silt fencing.

- Specific housekeeping and maintenance measures and their frequencies.
- Parking lot at Maxville Mine where stormwater was accumulating.
- Training procedures and schedules.
- Certification page signature needs to be updated to reflect current responsible party.
- Requirements for minimizing stormwater contact or secondary containment measures for spoils from caustic pond at Maxville.

Rule/Permit Reference: Permit Condition IX/VII

Corrective Action: Update the plan as required and provide copy to department for review.

Observation: *General* – Personnel training activities are being documented as required by BMP.

Observation: *General* – A copy of the current laboratory certification was available at the time of the inspection.

Observation: *General* – Daily logs/schedules showing plant operation and equipment maintenance was available.

Observation: *General* – Annual BMP personnel training records available.

Observation: *General* – Facilities are submitting monitoring data through EzDMR.

Observation: *General* – A copy of the letter of authorization (LOA) from the owner/permittee allowing the operator to sign DMRs was available.

6. Facility Site Review: Out-of-Compliance

Deficiency: Findings observed during inspection of the industrial wastewater facilities associated with mining or formerly mined areas:

- Material Handling
 - Lime spillage at Trail Ridge and Highland silos – clean and ensure stormwater goes to wastewater processing stream.
- Outdoor Storage Facilities
 - Needed to document that all areas are draining toward treatment system
 - Secondary containment structures are pumped to ground.
- Best Management Practices (BMPs)
 - During the inspection, collection ditches, silt fencing, borrow pits, and berms were observed throughout the mining sites which did not appear to be incorporated into the company’s routine inspections.
 - Ditch at Highlands appeared to convey runoff water westward, potentially offsite.
 - Twin Pines silt fences were overwhelmed with sand, process water and tailing filled deposited in a wetland without permit authorization. Area not being monitored or inspected.
 - Some eroded berms observed at North Maxville but still sufficient freeboard.
 - Wash water from the vehicle washing and stormwater from the equipment staging and chemical storage area has the potential to flow off-site.
- Housekeeping

- Significant amounts of material on the ground through Highland site. Some running off into ditch.
- Waste/Wastewater Management
 - The borrow pit treatment system at the toe of the Trail Ridge treatment ponds appears not to be included in regular inspections, is not readily accessible, and has places along the railroad tracks where water can potentially flow out of the permit boundary, possibly bypassing the NPDES outfall (Trail Ridge).
 - Brushy vegetation on dams of Trail Ridge treatment pond system does not allow visual inspection of dams that are actively used as part of the process water treatment system; large trees growing on dam walls could potentially affect dam integrity; water in borrow pits abuts the toe of the dam; some areas in the pond system may not have sufficient freeboard (Trail Ridge).
 - There are three active treatment ponds (11, 12, and 13), 9 inactive ponds from earlier processing periods. These inactive ponds, according to facility's permit, include roughly 654 reclaimed acres. Pond 8 appeared to be actively discharging but is not a permitted NPDES outfall; mine personnel stated that Ponds 1-9 are no longer receiving process water and have been reclaimed, however, no as-built drawings or request to transfer to operational phase have been received from these ponds (Highland).
 - North Maxville D001 was reported as not discharging in 2017 but was discharging during inspection due to rotten wooden stop gates.
- Pollutant Sources
 - Long term ponds may not have sufficient freeboard (Maxville).
 - Alum, barium chloride and lime vessels at Maxville are not in, or only partially surrounded by, secondary containment
 - Lime buildup on secondary containment at Maxville
 - Piles of road filling sediment were not within secondary containment at Maxville

Rule/Permit Reference: Permit Condition IX

Corrective Action: Evaluate the entire wastewater treatment systems at all sites for leaks, seepages, berm erosions and submit corrective action report on the findings. Submit as-built drawings or request to transfer to operational phase for inactive, reclaimed ponds.

Observation: *General* – The facility grounds were secured properly.

Observation: *General* – Safety equipment was available on the sites.

Observation: *General* – Inspection of the open ditch conveyance system from north of SR16 to the water treatment area is being conducted as required by permit condition V(3).

Observation: *General* – Foul odors did not permeate beyond the boundaries of the plant site at the time of the inspection.

Observation: *General* – No sinkholes were observed during site inspection.

7. **Flow Measurement:** Out-of-Compliance

Flow meter present and location as per permit?	Yes
Easy access to flow meter?	Yes

Deficiency: Staff gauge at D-001 (Trail Ridge) was broken.

Rule/Permit Reference: Rule 62-620.610

Corrective Action: Replace the staff gauge and provide picture of replacement.

Observation: The chart recorders/flow meters and totalizers appeared to be operating satisfactory.

8. Operation and Maintenance: Out-of-Compliance

Facility being operated as per permit?	No
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Deficiency: Facility not following appropriate Best Management Practices (BMPs). See BMP details in Section 6.

Rule/Permit Reference: Permit condition IX.7

Corrective Action: See notes in this inspection report.

Observation: The wet and dry mills were operating satisfactory. Currently using natural gas to operate mills. (Trail Ridge)

Observation: Facilities are not operating in accordance to it permits. See Records/Reports, Facility Site Review and Effluent Disposal sections of this report for comments.

9. Effluent Quality:

Trail Ridge Effluent Quality: Out-of-Compliance

DMRs review period	From 03/31/2016 to 02/28/2018
Any exceedances?	Yes

Observation: A review of the Discharge Monitoring Reports (DMRs) revealed the following exceedances:

Date	Parameter	Result	Limit	Statistical Base	Units
7/31/2016	Iron, Total Recoverable	1.4	1.0	daily max	mg/L
8/31/2016	Iron, Total Recoverable	1.5	1.0	daily max	mg/L
9/30/2016	Iron, Total Recoverable	1.8	1.0	daily max	mg/L
10/31/2016	Iron, Total Recoverable	1.4	1.0	daily max	mg/L
10/31/2017	Iron, Total Recoverable	2.1	2.0	daily max	mg/L
11/30/2017	Iron, Total Recoverable	2.1	2.0	daily max	mg/L

Date	Parameter	Result	Limit	Statistical Base	Units
8/31/2016	Iron, Total Recoverable	1.2	1.0	mon avg	mg/L
9/30/2016	Iron, Total Recoverable	1.4	1.0	mon avg	mg/L
11/31/2016	IC25 Statre 7day Chr Ceriodaphnia	68.3	100	single sample	%
11/31/2016	IC25 Statre 7day Chr Ceriodaphnia	64.1	100	single sample	%
11/31/2016	IC25 Statre 7day Chr Ceriodaphnia	73.8	100	single sample	%
7/31/2017	IC25 Statre 7day Chr Ceriodaphnia	64.6	100	single sample	%
8/31/2017	IC25 Statre 7day Chr Ceriodaphnia	52.2	100	single sample	%
12/31/2016	LC50 Statre 96hr Acu Ceriodaphnia	64.1	100	single sample	%
12/31/2016	LC50 Statre 96hr Acu Cyprinella Leedsi	73.8	100	single sample	%
9/30/2017	Flow	79.2	40	daily max	MGD
8/31/2016	Zinc, Total Recoverable	0.19	0	daily max	mg/L

Deficiency: The parameters noted in table above exceeded the permit limit. Zinc also exceeded the Technical Review Criteria (TRC).

Rule/Permit Reference: Permit Condition I.A.1

Corrective Action: The corrective actions for iron are noted in the AO 185. Facility is working with District Toxicity Coordinator on plan to toxicity. Flow and zinc will be continually monitored by the district due to the infrequency of the exceedance.

Maxville Effluent Quality: Out-of-Compliance

DMRs review period	From 01/01/16 to 02/28/18
Any exceedances?	Yes

Observation: A review of the Discharge Monitoring Reports (DMRs) revealed the following exceedances:

Date	Parameter	Result	Limit	Statistical Base	Units
12/31/2016	Chronic Toxicity Acu - Ceriodaphnia	48.3	100	min	%
08/31/2017	Chronic Toxicity Chr - Ceriodaphnia	42.1	100	min	%
09/30/2017	Flow	15.1	10	daily max	MGD

Observation: These are not considered significant non-compliance because of the infrequency of the exceedances.

North Maxville Effluent Quality: Out-of-Compliance

DMRs review period	From 09/01/14 to 02/28/18
Any exceedances?	Yes

Observation: A review of the Discharge Monitoring Reports (DMRs) revealed the following exceedances:

Date	Parameter	Result	Limit	Statistical Base	Units
04/31/2018	Chronic Toxicity Acu - Ceriodaphnia	87.8	100	min	%

This is not considered significant non-compliance because of the infrequency of the exceedances.

Highland: Effluent Quality: Out-of-Compliance

DMRs review period	From 01/01/16 to 08/31/17
Any exceedances?	Yes

Observation: A review of the Discharge Monitoring Reports (DMRs) revealed the following exceedance:

Date	Parameter	Result	Limit	Statistical Base	Units
06/30/2016	LC50 Statre 96hr Acu Ceriodaphnia	77.8	100	min	%

Observation: This is not considered significant non-compliance because of the infrequency of the exceedances.

10. Effluent Disposal: Significant-Out-Of-Compliance

Facilities discharging?	Yes
Discharge location(s) as per permit?	No

Deficiency: Observed and/or potential unpermitted discharges:

- Discharges were observed in the Highlands wastewater treatment area, the processing plant area, and the collection ditches that were neither identified in the permit nor monitored and/or inspected by the facility. A completion and certification has not been submitted by the Chemours nor a release statement provided by the Department; therefore, this area continues to be subject to NPDES requirements. At the Highland processing plant area, a collection ditch which run east to west was observed along the north side of the plant. This ditch was observed to have receive runoff from processing areas, outdoor material storage areas, and the access road. Trails of sediment/site material were observed leading to the ditch along with accumulated material along the ditch. Water was observed flowing in the ditch which appeared to continue west potentially discharging offsite.
 - In addition to the three active treatment ponds (11, 12, and 13), there are 9 inactive ponds from earlier processing periods. These inactive ponds, according to facility's permit, include roughly 654 reclaimed acres. Pond 8 appeared to be actively discharging but is not a permitted NPDES outfall; mine personnel stated that Ponds 1-9 are no longer receiving process water and have been reclaimed, however, no as-built drawings or request to transfer to operational phase have been received for these ponds.
 - Leaky valve at Highland D-002.
 - Stormwater runoff from laydown yard is not managed through an engineered stormwater system and enters wetlands without treatment; pipes are stored in wetlands that are not authorized for disturbance (North Maxville).
 - North Maxville D001 was discharging during inspection due to rotten wooden stop gates.
 - Observed sedimentation overtopping silt fencing around mining areas.
 - Seepage is visible at toe of process water treatment ponds that is not captured and treated prior to discharge (e.g., Pond JD-9 at North Maxville).
- The following were observed during the inspections of the mining and reclamation areas:
- Erosion gully repairs are needed in the reclamation areas on the east side of mine (North Maxville).
 - Material discharge was observed from cell #72 and fill was deposited in a wetland not authorized for disturbance (North Maxville).

Rule/Permit Reference: Rule 62-620.610(20), F.A.C.

Corrective Action: Evaluate the wastewater treatment systems at mining sites for unpermitted discharges and improperly maintained/damaged silt fences. Submit corrective action report on the findings.

11. Biosolids/Sludge: In-Compliance

Observation: *General* – The method of disposal for humate sludge generated by the treatment of industrial wastewater is land application after drying, compacting, and covering with soil as part of the land reclamation process (Trail Ridge, North Maxville and Highland).

Observation: *General* – The method of sludge use or disposal by this facility is land application onsite. Humate solids may be land applied in accordance with the Bureau of Mines permit (Maxville Mine).

Observation: *General* – Review the Record/Report and Facility Site Review for deficiencies.

12. Groundwater Quality:

Trail Ridge: In-Compliance

DMRs review period	From 03/01/2016 to 12/31/2017
Any exceedances?	Yes
All monitoring wells accessible secured & locked?	Yes

Observation: A review of the Groundwater Monitoring Reports revealed the following exceedances:

Date	MW ID#	Parameter	Result	Limit
03/31/2016	MWC-30	Barium	67	2.0
03/31/2016	MWC-15	Barium	22	2.0
06/30/2016	MWC-30	Barium	62	2.0
06/31/2016	MWC-15	Barium	18	2.0
09/30/2016	MWC-30	Barium	2300	2.0
09/30/2016	MWC-15	Barium	18	2.0
03/31/2017	MWC-30	Barium	71	2.0

Date	MW ID#	Parameter	Result	Limit
03/31/2017	MWC-15	Barium	20	2.0
06/30/2017	MWC-30	Barium	73	2.0
06/30/20177	MWC-15	Barium	20	2.0

Observation: The only exceedance is MWC-30, 9/30/2017, 2.3 mg/L. The unit (ug/L) is incorrect in the WAFR database and on the monitoring report. The unit should be mg/L as stated in the facility permit. This will be corrected as required.

Maxville: In-Compliance

DMRs review period	From 01/01/16 to 12/31/17
Any exceedances?	Yes
All monitoring wells accessible, secured & locked?	Yes

Observation: A review of the Groundwater Monitoring Reports revealed the following exceedances:

Date	MW ID#	Parameter	Result	Limit
03/31/2016	MWC-2	pH	3.81	6.5-8.5
03/31/2016	MWC-2	Color	26	15
03/30/2016	MWC-2	Iron	13000	300
03/31/2016	MWC-3	pH	3.07	6.5-8.5
03/31/2016	MWC-3	Iron	8200	300
03/31/2016	MWC-5	pH	5.79	6.5-8.5
03/31/2016	MWC-5	Iron	1100	300
03/31/2016	MWC-8	pH	4.27	6.5-8.5
03/31/2016	MWC-8	Iron	350	300
06/31/2016	MWC-2	pH	3.62	6.5-8.5

Date	MW ID#	Parameter	Result	Limit
06/31/2016	MWC-2	Iron	16000	300
06/31/2016	MWC-3	pH	3.86	6.5-8.5
06/31/2016	MWC-3	Iron	23000	300
06/31/2016	MWC-5	pH	5.4	6.5-8.5
06/31/2016	MWC-5	Iron	1200	300
06/31/2016	MWC-8	pH	4.79	6.5-8.5
06/31/2016	MWC-8	Iron	1800	300
09/31/2016	MWC-2	pH	3.7	6.5-8.5
09/31/2016	MWC-2	Iron	17000	300
09/31/2016	MWC-3	pH	3.9	6.5-8.5
09/31/2016	MWC-3	Iron	22000	300
09/31/2016	MWC-5	pH	5.3	6.5-8.5
09/31/2016	MWC-5	Iron	980	300
09/31/2016	MWC-8	pH	4.3	6.5-8.5
09/31/2016	MWC-8	Iron	1300	300
12/31/2016	MWC-2	pH	4.4	6.5-8.5
12/31/2016	MWC-2	Iron	20000	300
12/31/2016	MWC-3	pH	3.9	6.5-8.5
12/31/2016	MWC-3	Iron	7100	300
12/31/2016	MWC-5	Color	21	15
12/31/2016	MWC-5	Iron	470	300
12/31/2016	MWC-8	pH	5.5	6.5-8.5
12/31/2016	MWC-8	Iron	1200	300
03/31/2017	MWC-2	pH	3.58	6.5-8.5
03/31/2017	MWC-2	Iron	19000	300

Date	MW ID#	Parameter	Result	Limit
03/31/2017	MWC-3	pH	3.17	6.5-8.5
03/31/2017	MWC-3	Iron	8400	300
03/31/2017	MWC-5	pH	5.4	6.5-8.5
03/31/2017	MWC-5	Iron	710	300
03/31/2017	MWC-8	pH	3.95	6.5-8.5
03/31/2017	MWC-8	Iron	320	300
09/31/2017	MWC-2	pH	3.98	6.5-8.5
09/31/2017	MWC-2	Alpha Gross PA	36.2	15
09/31/2017	MWC-2	Radium 226 +228	23.3	5
09/31/2017	MWC-2	Iron	18	0.3
09/31/2017	MWC-2A	pH	4.72	6.5-8.5
09/31/2017	MWC-2A	Iron	1200	300
09/31/2017	MWC-3	pH	4.08	6.5-8.5
09/31/2017	MWC-3	Alpha Gross PA	40.8	15
09/31/2017	MWC-3	Radium 226 +228	24.4	5
09/31/2017	MWC-3	Iron	26	0.3
09/31/2017	MWC-3A	pH	4.57	6.5-8.5
09/31/2017	MWC-3A	color	21	15
09/31/2017	MWC-3A	Iron	25	0.3
09/31/2017	MWC-3B	pH	4.05	6.5-8.5
09/31/2017	MWC-3B	Alpha Gross PA	51.9	15
09/31/2017	MWC-3B	Radium 226 +228	26.4	5
09/31/2017	MWC-3B	Iron	15	0.3
09/31/2017	MWC-5	Color	18	15
09/31/2017	MWC-5	pH	5.95	6.5-8.5

Date	MW ID#	Parameter	Result	Limit
09/31/2017	MWC-5	Iron	0.6	0.3
09/31/2017	MWC-8	pH	4.87	6.5-8.5
09/31/2017	MWC-8	Iron	1.8	0.3

Additional Comments: All wells have a history of low pH levels as the background levels are also low. Iron levels are consistent with the history of the facility. Since iron is a secondary standard, these exceedances are considered a deficiency and not a violation.

Observation: The facility is under a consent order (CO 16-1402) for Radium 226+228 and Gross Alpha exceedances, should be “report only” (interim limit) upon effective date of CO.

North Maxville: In-Compliance

DMRs review period	From 09/01/14 to 12/31/17
Any exceedances?	Yes
All monitoring wells accessible, secured & locked?	Yes

Observation: A review of the Groundwater Monitoring Reports revealed the following exceedances:

Date	MW ID#	Parameter	Result	Limit
09/30/2014	MWC-3	Iron	1.2	0.3
12/31/2014	MWC-3	Iron	2.1	0.3
03/31/2015	MWC-3	Iron	4.4	0.3
03/31/2015	MWC-3	pH	4.8	6.5-8.5
06/31/2015	MWC-3	Iron	1.6	0.3
06/31/2015	MWC-3	pH	4.43	6.5-8.5
09/30/2015	MWC-3	Iron	1.2	0.3
12/31/2015	MWC-3	Iron	1.5	0.3
03/31/2016	MWC-3	Iron	4.3	0.3
06/30/2016	MWC-3	Iron	1.3	0.3
09/30/2016	MWC-4	Iron	0.8	0.3

Date	MW ID#	Parameter	Result	Limit
09/30/2016	MWC-4	pH	4.1	6.5-8.5
09/30/2016	MWC-3w	Iron	1.2	0.3
09/30/2016	MWC-3w	pH	4.9	6.5-8.5
12/31/2016	MWC-4	Iron	0.94	0.3
12/31/2016	MWC-4	pH	5.16	6.5-8.5
12/31/2016	MWC-3w	Iron	0.83	0.3
12/31/2016	MWC-3w	pH	5.2	6.5-8.5
03/31/2017	MWC-4	Iron	0.6	0.3
03/31/2017	MWC-4	pH	3.8	6.5-8.5
03/31/2017	MWC-3w	Iron	1.3	0.3
03/31/2017	MWC-3w	pH	3.8	6.5-8.5
06/30/2017	MWC-4	Iron	0.59	0.3
06/30/2017	MWC-4	pH	4.61	6.5-8.5
06/30/2017	MWC-3w	Iron	0.87	0.3
06/30/2017	MWC-3w	pH	4.72	6.5-8.5

Additional Comments: Since all wells have a history of elevated iron and low pH levels and the background wells show the same elevated iron and low pH levels these exceedances are not considered non-compliance.

Highlands: In-Compliance

DMRs review period	From 01/01/16 to 12/31/17
Any exceedances?	Yes
All monitoring wells accessible, secured & locked?	Yes

Observation: A review of the Groundwater Monitoring Reports revealed the following exceedances:

Date	MW ID#	Parameter	Result	Limit
12/31/2017	MWC-0	Alpha Gross PA	20	15
12/31/2017	MWC-3	Radium	13.2	5.0

Date	MW ID#	Parameter	Result	Limit
		226+228		

Observation: Appropriate personnel conduct the ground water sampling.

Observation: Monitoring wells appear to be in correct location as describe in the permit.

13. SSO Survey: Not Applicable

Does the facility have an Operation and Maintenance Manual for their collection system?	Choose an item.
Does the facility track spills in their collection system?	Choose an item.
How does the facility follow up on spills?	Click or tap here to enter text.
Does the facility have procedures for minimizing spills?	Choose an item.
Are those procedures included in the Operation and Maintenance Manual or in a separate document?	Click or tap here to enter text.
How often is the manual updated?	Click or tap here to enter text.

Deficiency: NA

Rule/Permit Reference: NA

Corrective Action: NA

14. Other: Not Evaluated