

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
ONE NATIONAL LIFE DRIVE, MAIN BUILDING, 2nd FLOOR
MONTPELIER, VT 05620-3522

Permit No.: 3-0348
PIN: NS88-0007
NPDES No.: VT0001023

Name of Applicant: Imerys Talc Vermont, Inc.
73 East Hill Road
Ludlow, VT 05149

Expiration Date: **December 31, 2023**

DISCHARGE PERMIT

In compliance with the provisions of the Vermont Water Pollution Control Act as amended (10 V.S.A. chapter 47), the Vermont Water Pollution Control Permit Regulations as amended (Environmental Protection Rules, Chapter 13), and the federal Clean Water Act as amended (33 U.S.C. § 1251 *et seq.*), and implementing federal regulations, Imerys Talc Vermont, Inc. Vermont (hereinafter referred to as the "Permittee") is authorized by the Secretary of the Agency of Natural Resources ("Secretary") to discharge from the Argonaut Mine (Facility) to the unnamed tributary of Soapstone Brook River in accordance with the following conditions.

This permit shall become effective on January 1, 2019.

Emily Boedecker, Commissioner
Department of Environmental Conservation

By: Jessica Bulova

Date: November 16, 2018

Jessica Bulova, Wastewater Program Manager
Watershed Management Division

I. SPECIAL CONDITIONS**A. EFFLUENT LIMITS**

1. During the term of this permit, the Permittee is authorized to discharge from outfall serial number S/N 001: treated runoff from the Argonaut Mine and yard area, haul roads, and mine overflow during periods of high precipitation and snow melt to the unnamed tributary of Soapstone Brook. Such effluent shall be sampled as described and for which the characteristics shall not exceed the values listed below:

EFFLUENT CHARACTERISTICS	Discharge Limitations		Monitoring Requirements	
	Annual Average	Maximum Day	Measurement Frequency	Sample Type
Flow		As necessary	Quarterly	Estimate
Arsenic		Monitor Only	Quarterly	Grab
Turbidity	10 NTU		Quarterly	Grab
pH		Between 6.5-8.5 Standard Units	Quarterly	Grab
Priority Pollutant Metals	Monitor Only		Annually ¹	Grab

¹ Priority Pollutant Metals (Ag, As, Sb, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ti, Zn) shall be measured annually during normal mine operations. Samples should be taken during the month of March, April, or May with results submitted with the quarterly monitoring report due June 15th of each year.

2. Samples taken in compliance with the monitoring requirements specified above shall be taken in accordance with the following:
- Samples collected for Arsenic shall be taken at the following locations:
 - At the outfall of Settling Pond #2.
 - At a location in the receiving water no greater than 200 feet downstream from the outfall of Settling Pond #2.
 - At a location in the receiving water upstream of the outfall of Settling Pond #2.
 - Turbidity and pH samples shall be collected at the outfall of Settling Pond #2.
 - Arsenic, turbidity, and pH analysis shall be conducted on the same sample.
 - The flow estimate shall occur on the same day as the arsenic, turbidity, and pH sample is collected.
 - The permittee shall measure and report the precipitation event which triggers the discharge event sampled.**

3. If the concentration of arsenic sampled at the downstream location in the receiving water is less than the limit of detection (0.005 mg/L), then the discharge will be considered not to have caused a violation of the Vermont Water Quality Standards for arsenic.
4. If the concentration of arsenic sampled at the upstream location in the receiving water is greater than the limit of detection and the concentration of arsenic sampled at the downstream location in the receiving water is less than or equal to the concentration at the upstream location, then the discharge will be considered not to have caused a violation of the Water Quality Standards for arsenic.
5. The settling ponds shall be cleaned as necessary to maintain design treatment specifications. Any maintenance shall be detailed on the quarterly report form.
6. Based on the results of the flow estimate, precipitation measurement, and arsenic monitoring the Department may reopen this permit to require the permittee to improve the treatment of this discharge or reinstitute the operation of the arsenic removal treatment system in order to prevent a violation of Water Quality Standards in the receiving water.
7. This discharge shall not cause a violation of Water Quality Standards in the receiving water.

B. REAPPLICATION

If the Permittee desires to continue to discharge after the expiration of this permit, the Permittee shall reapply on the application forms then in use at least 180 days before this permit expires.

Reapply for a Discharge Permit by: **June 30, 2023**

C. OPERATING FEES

This discharge is subject to operating fees as required by 3 V.S.A. § 2822.

D. MONITORING AND REPORTING

1. Sampling and Analysis

The sampling, preservation, handling, and analytical methods used shall conform to the test procedures published in Title 40 of the Code of Federal Regulations (C.F.R.) Part 136.

The Permittee shall use sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. Part 136 for the analysis of the pollutants or pollutant parameters required under this Section.

Samples shall be representative of the volume and quality of effluent discharged over the sampling and reporting period. All samples are to be taken during normal operating hours. The

Permittee shall identify the effluent sampling location used for each discharge. A description of the effluent sample location is included in Condition I.A.1.

2. Reporting

The Permittee is required to submit quarterly reports of monitoring results on Discharge Monitoring Report (DMR) form WR-43. Reports are due on the **15th day of each quarter, beginning with the quarter following the effective date of this permit.**

The Permittee shall electronically submit its DMRs via Vermont's on-line electronic reporting system. The Permittee shall electronically submit additional compliance monitoring data and reports specified by the Secretary. When the Permittee submits DMRs using an electronic system designated by the Secretary, which requires attachment of scanned DMRs in pdf format, it is not required to submit hard copies of DMRs. The link below shall be used for electronic submittals:

<https://anronline.vermont.gov/>

If, in any reporting period, there has been no discharge, the Permittee must submit that information by the report due date.

All reports shall be signed:

- a) In the case of corporations, by a principal executive officer of at least the level of vice president, or his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the permit form originates and the authorization is made in writing and submitted to the Secretary;
- b) In the case of a partnership, by a general partner;
- c) In the case of a sole proprietorship, by the proprietor; or
- d) In the case of a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

In addition to the monitoring and reporting requirements given above, daily monitoring of certain parameters for operational control shall be submitted to the Secretary on the DMR form WR-43. Operations reports shall be submitted monthly.

3. Recording of Results

The Permittee shall maintain records of all information resulting from any monitoring activities required, including:

- a) The exact place, date, and time of sampling or measurement;
- b) The individual(s) who performed the sampling or measurements;

- c) The dates and times the analyses were performed;
- d) The individual(s) who performed the analyses;
- e) The analytical techniques and methods used including sample collection handling and preservation techniques;
- f) The results of such analyses;
- g) The records of monitoring activities and results, including all instrumentation and calibration and maintenance records;
- h) The original calculation and data bench sheets of the operator who performed analysis of the influent or effluent pursuant to requirements of this permit; and
- i) For analyses performed by contract laboratories:
 - a. The detection level reported by the laboratory for each sample; and
 - b. The laboratory analytical report including documentation of the QA/QC and analytical procedures.

The results of monitoring requirements shall be reported (in the units specified) on the DMR form WR-43 or other forms approved by the Secretary.

When “non-detects” are recorded, the method detection limit shall be reported and used in calculating any time-period averaging for reporting on DMRs.

4. Additional Monitoring

If the Permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the DMR form WR-43. Such increased frequency shall also be indicated.

II. GENERAL CONDITIONS

A. MANAGEMENT REQUIREMENTS

1. Facility Modification / Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and/or criminal penalties pursuant to 10 V.S.A. chapters 47, 201, and/or 211. Any anticipated facility alterations or expansions or process modifications which will result in new, different, or increased discharges of any pollutants must be reported by submission of a new permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Secretary of such changes. Following such notice, the permit may be modified, pursuant to Condition II.B.4 of this permit, to specify and limit any pollutants not previously limited.

In addition, the Permittee, within 30 days of the of the date on which the Permittee is notified of such discharge, shall provide notice to the Secretary of the following:

- a) Any new introduction of pollutants into the treatment works from a source which would be a new source as defined in Section 306 of the Clean Water Act if such source were discharging pollutants;
- b) Except for such categories and classes of point sources or discharges specified by the Secretary, any new introduction of pollutants into the treatment works from a source which would be subject to Section 301 of the Clean Water Act if such source were discharging pollutants; and
- c) Any substantial change in volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into such works at the time of issuance of the permit.

The notice shall include:

- i. The quality and quantity of the discharge to be introduced into the system, and
- ii. The anticipated impact of such change in the quality or quantity of the effluent to be discharged from the WWTF.

2. Noncompliance Notification

- a) The Permittee shall give advance notice to the Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

- b) In the event the Permittee is unable to comply with any of the conditions of this permit due, among other reasons, to:
 - i. Breakdown or maintenance of waste treatment equipment (biological and physical-chemical systems including all pipes, transfer pumps, compressors, collection ponds or tanks for the segregation of treated or untreated wastes, ion exchange columns, or carbon absorption units);
 - ii. Accidents caused by human error or negligence;
 - iii. Any unanticipated bypass or upset which exceeds any effluent limitation in the permit;
 - iv. Violation of a maximum day discharge limitation for any of the pollutants listed by the Secretary in this permit; or
 - v. Other causes such as acts of nature,

the Permittee shall provide notice as specified in subdivision (c) of this subsection.

- c) For any non-compliance not covered under Condition II.A.2.c. of this permit, an operator of a WWTF or the operator's delegate shall notify the Secretary within 24 hours of becoming aware of such condition and shall provide the Secretary with the following information, in writing, within five days:
 - i. Cause of non-compliance;
 - ii. A description of the non-complying discharge including its impact upon the receiving water;
 - iii. Anticipated time the condition of non-compliance is expected to continue or, if such condition has been corrected, the duration of the period of non-compliance;
 - iv. Steps taken by the Permittee to reduce and eliminate the non-complying discharge; and
 - v. Steps to be taken by the Permittee to prevent recurrence of the condition of non-compliance.

3. Operation and Maintenance

All waste collection, control, treatment, and disposal facilities shall be operated in a manner consistent with the following:

- a) The Permittee shall, at all times, maintain in good working order and operate as efficiently as possible all treatment and control facilities and systems (and related

appurtenances) installed or used by the Permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

- b) The Permittee shall provide an adequate operating staff which is duly qualified to carry out the operation, maintenance, and testing functions required to ensure compliance with the conditions of this permit; and

4. Quality Control

The Permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements or shall ensure that both activities will be conducted.

The Permittee shall keep records of these activities and shall provide such records upon request of the Secretary.

For purposes of demonstrating compliance with the requirements of Condition II.A.3.a) of this permit regarding adequate laboratory controls and appropriate quality assurance procedures, the Permittee shall conduct an annual laboratory proficiency test, via an accredited laboratory, for the analysis of all pollutant parameters performed within their facility laboratory and reported as required by this permit. This can be carried out as part of an EPA DMR-QA study. Results shall be submitted to the Secretary by **December 31, annually**. The first proficiency test results shall be submitted by **December 31, 2019**.

5. Bypass

The bypass of facilities (including pump stations) is prohibited, except where authorized under the terms and conditions of an Emergency Pollution Permit issued pursuant to 10 V.S.A. § 1268. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the activity in order to maintain compliance with the conditions of this permit.

6. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any adverse impact to waters of the State, the environment, or human health resulting from non-compliance with any condition specified in this permit, including accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, all calibration and maintenance of instrumentation records and all original chart recordings for continuous monitoring

instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a minimum of three years, and shall be submitted to the Secretary upon request. This period shall be extended during the course of unresolved litigation regarding the discharge of pollutants or when requested by the Secretary.

8. Solids Management

Collected screenings, sludges, and other solids removed in the course of treatment and control of wastewaters shall be stored, treated, and disposed of in accordance with 10 V.S.A. chapter 159 and with the terms and conditions of any certification, interim or final, transitional operation authorization, or order issued pursuant to 10 V.S.A. chapter 159 that is in effect on the issuance date of this permit or is issued during the term of this permit.

9. Emergency Pollution Permits

Maintenance activities, or emergencies resulting from equipment failure or malfunction, including power outages, which result in an effluent which exceeds the effluent limitations specified herein, shall be considered a violation of the conditions of this permit, unless the Permittee's discharge is covered under an emergency pollution permit under the provisions of 10 V.S.A. § 1268. The Permittee shall notify the Secretary of the emergency situation by the next working day, unless notice is required sooner under Condition II.A.2.

10 V.S.A. § Section 1268 reads as follows:

When a discharge permit holder finds that pollution abatement facilities require repairs, replacement or other corrective action in order for them to continue to meet standards specified in the permit, he may apply in the manner specified by the secretary for an emergency pollution permit for a term sufficient to effect repairs, replacements or other corrective action. The Secretary shall proceed in accordance with chapter 170 of this title. No emergency pollution permit shall be issued unless the applicant certifies, and the secretary finds that:

- (1) there is no present, reasonable alternative means of disposing of the waste other than by discharging it into the waters of the state during the limited period of time of the emergency;
- (2) the denial of an emergency pollution permit would work an extreme hardship upon the applicant;
- (3) the granting of an emergency pollution permit will result in some public benefit;
- (4) the discharge will not be unreasonably harmful to the quality of the receiving waters;
- (5) the cause or reason for the emergency is not due to willful or intended acts or omissions of the applicant.

Application shall be made to the Secretary at the following address: Agency of Natural Resources, Department of Environmental Conservation, One National Life Drive, Main Building, 2nd Floor, Montpelier VT 05620-3522.

B. RESPONSIBILITIES

1. Right of Entry

The Permittee shall allow the Secretary or authorized representative, upon the presentation of proper credentials:

- a) To enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b) To have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
- c) To inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d) To sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

2. Transfer of Ownership or Control

This permit is not transferable without prior written approval of the Secretary. All application and operating fees must be paid in full prior to transfer of this permit. In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the Permittee shall provide a copy of this permit to the succeeding owner or controller and shall send written notification of the change in ownership or control to the Secretary **at least 30 days in advance of the proposed transfer date**. The notice to the Secretary shall include a written agreement between the existing and new Permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them. The Permittee shall also inform the prospective owner or operator of their responsibility to make an application for transfer of this permit.

This request for transfer application must include as a minimum:

- a) A properly completed application form provided by the Secretary and the applicable processing fee.
- b) A written statement from the prospective owner or operator certifying:
 - i. The conditions of the operation that contribute to, or affect, the discharge will not be materially different under the new ownership;

- ii. The prospective owner or operator has read and is familiar with the terms of the permit and agrees to comply with all terms and conditions of the permit; and
 - iii. The prospective owner or operator has adequate funding to operate and maintain the treatment system and remain in compliance with the terms and conditions of the permit.
- c) The date of the sale or transfer.

The Secretary may require additional information dependent upon the current status of the facility operation, maintenance, and permit compliance.

3. Confidentiality

Pursuant to 10 V.S.A. § 1259(b):

Any records or information obtained under this permit program that constitutes trade secrets under 1 V.S.A. § 317(c)(9) shall be kept confidential, except that such records or information may be disclosed to authorized representatives of the State and the United States when relevant to any proceedings under this chapter.

Claims for confidentiality for the following information will be denied:

- a) The name and address of any permit applicant or Permittee.
- b) Permit applications, permits, and effluent data.
- c) Information required by application forms, including information submitted on the forms themselves and any attachments used to supply information required by the forms.

4. Permit Modification, Suspension, and Revocation

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including the following:

- a) Violation of any terms or conditions of this permit;
- b) Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c) Reallocation of WLA under the LC TMDL;
- d) Development of an integrated WWTF and stormwater runoff NPDES permit; or
- e) A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance shall not stay any permit condition.

The Permittee shall provide to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Secretary upon request, copies of records required to be kept by this permit.

5. Toxic Effluent Standards

If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Clean Water Act for a toxic pollutant which is present in the Permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, then this permit shall be modified or revoked and reissued, pursuant to Condition II.B.4 of this permit, in accordance with the toxic effluent standard or prohibition and the Permittee so notified.

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject under 10 V.S.A. § 1281.

7. Other Materials

Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

a) They are not:

- i.** Designated as toxic or hazardous under provisions of Sections 307 and 311, respectively, of the Clean Water Act, or

- ii.** Known to be hazardous or toxic by the Permittee,

except that such materials indicated in (i) and (ii) above may be discharged in certain limited amounts with the written approval of, and under special conditions established by, the Secretary or his/her designated representative, if the substances will not pose any imminent hazard to the public health or safety;

- b) The discharge of such materials will not violate the Vermont Water Quality Standards; and**

- c) The Permittee is not notified by the Secretary to eliminate or reduce the quantity of such materials entering the water.

8. Navigable Waters

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

9. Civil and Criminal Liability

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Except as provided in "Bypass" (Condition II.A.5) and "Emergency Pollution Permits" (Condition II.A.9), nothing in this permit shall be construed to relieve the Permittee from civil or criminal penalties for noncompliance. Civil and criminal penalties for non-compliance are provided for in 10 V.S.A. Chapters 47, 201, and 211.

10. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.

11. Property Rights

Issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

12. Other Information

If the Permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Secretary, it shall promptly submit such facts or information.

13. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

14. Authority

This permit is issued under authority of 10 V.S.A. §§1258 and 1259 of the Vermont Water Pollution Control Act, the Vermont Water Pollution Control Permit Regulation, and Section 402 of the Clean Water Act, as amended.

15. Definitions

For purposes of this permit, the following definitions shall apply.

Agency – means the Vermont Agency of Natural Resources.

Annual Average - means the highest allowable average of daily discharges calculated as the sum of all daily discharges (mg/L, lbs or gallons) measured during a calendar year divided by the number of daily discharges measured during that year.

Average - means the arithmetic means of values taken at the frequency required for each parameter over the specified period.

Bypass – means the intentional diversion of waste streams from any portion of the treatment facility.

The Clean Water Act - means the federal Clean Water Act, as amended (33 U.S.C. § 1251, *et seq.*).

Composite Sample - means a sample consisting of a minimum of one grab sample per hour collected during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportionally to flow over that same time period.

Daily Discharge - means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

For pollutants with limitations expressed in pounds the daily discharge is calculated as the total pounds of pollutants discharged over the day.

For pollutants with limitations expressed in mg/L the daily discharge is calculated as the average measurement of the pollutant over the day.

Discharge – means the placing, depositing, or emission of any wastes, directly or indirectly, into an injection well or into the waters of the State.

Grab Sample – means an individual sample collected in a period of less than 15 minutes.

Incompatible Substance – means any waste being discharged into the treatment works which interferes with, passes through without treatment, or is otherwise incompatible with said works or would have a substantial adverse effect on the works or on water quality. This includes all pollutants required to be regulated under the Clean Water Act.

Instantaneous Maximum - means a value not to be exceeded in any grab sample.

Major Contributing Industry – means one that: (1) has a flow of 50,000 gallons or more per average work day; (2) has a flow greater than five percent of the flow carried by the municipal system receiving the waste; (3) has in its wastes a toxic pollutant in toxic amounts as defined in standards issued under Section 307(a) of the Clean Water Act; or (4) has a significant impact, either singly or in combination with other contributing industries, on a treatment works or on the quality of effluent from that treatment works.

Maximum Day (maximum daily discharge limitation) - The highest allowable “daily discharge” (mg/L, lbs or gallons).

Mean - is the arithmetic mean.

Monthly Average (average monthly discharge limitation) – means the highest allowable average of daily discharges (mg/L, lbs or gallons) over a calendar month, calculated as the sum of all daily discharges (mg/L, lbs or gallons) measured during a calendar month divided by the number of daily discharges measured during that month.

NPDES - The National Pollutant Discharge Elimination System.

Secretary – means the Secretary of the Agency of Natural Resources or the Secretary’s duly authorized representative.

Septage – means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Untreated Discharge – means (1) combined sewer overflows from a WWTF; (2) overflows from sanitary sewers and combined sewer systems that are part of a WWTF during dry weather flows, which result in a discharge to waters of the State; (3) upsets or bypasses around or within a WWTF during dry or wet weather conditions that are due to factors unrelated to a wet weather storm event and that result in a discharge of sewage that has not been fully treated to waters of the State; and (4) discharges from a WWTF to separate storm sewer systems.

Waste – means effluent, sewage or any substance or material, liquid, gaseous, solid, or radioactive, including heated liquids, whether or not harmful or deleterious to waters.

Waste Management Zone – A specific reach of Class B waters designated by a permit to accept the discharge of properly treated wastes that prior to treatment contained organisms pathogenic to human beings. Throughout the receiving waters, water quality criteria must be achieved but increased health risks exist in a waste management zone due to the authorized discharge.

Waters includes all rivers, streams, creeks, brooks, reservoirs, ponds, lakes, springs, and all bodies of surface waters, artificial or natural, which are contained within, flow through, or border upon the State or any portion of it.

Weekly average - (average weekly discharge limitation) – means the highest allowable average of daily discharges (mg/L, lbs or gallons) over a calendar week, calculated as the sum of all daily discharges (mg/L, lbs or gallons) measured during a calendar week divided by the number of daily discharges measured during that week.

Whole Effluent Toxicity (WET) – Means the aggregate toxic effect of an effluent measured directly by a toxicity test.

WWTF or wastewater treatment facility shall have the same meaning as “pollution abatement facilities,” as defined under 10 V.S.A. § 1251, which means municipal sewage treatment plants, pumping stations, interceptor and outfall sewers, and attendant facilities as prescribed by the Department to abate pollution of the waters of the State.

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WATERSHED MANAGEMENT DIVISION
ONE NATIONAL LIFE DRIVE, MAIN BUILDING, 2ND FLOOR
MONTPELIER, VT 05620-3522

**FACT SHEET FOR DRAFT PERMIT
(September 2018)**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO
DISCHARGE TO WATERS OF THE STATE**

PERMIT NO: 3-0348
PIN: NS88-0007
NPDES NO: VT0001023

NAME AND ADDRESS OF APPLICANT:

Imerys Talc Vermont, Inc.
73 East Hill Road
Ludlow, VT 05149

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Argonaut Mine
103 Argonaut Rd
Ludlow, Vermont

RECEIVING WATER: Unnamed Tributary of Soapstone Brook

CLASSIFICATION: All uses Class B(2). Class B waters are suitable for swimming and other primary contact recreation; irrigation and agricultural uses; aquatic biota and aquatic habitat; good aesthetic value; boating, fishing, and other recreational uses; and suitable for public water source with filtration and disinfection or other required treatment.

I. Proposed Action, Type of Facility, and Discharge Location

The Secretary of the Vermont Agency of Natural Resources (Secretary) received a renewal application for the permit to discharge into the designated receiving water from the above-named applicant on **September 12, 2017**. The facility's previous permit was issued on **April 1, 2013**. The previous permit (hereafter referred to as the "current permit") has been administratively continued, pursuant to 3 V.S.A. § 814, as the applicant filed a complete application for permit reissuance within the prescribed time period as per the Vermont Water Pollution Control Permit Regulations (VWPCPR) § 13.5(b). At this time, the Secretary has made a tentative decision to reissue the discharge permit.

A map showing the location of facility, outfalls and the receiving water is provided below.

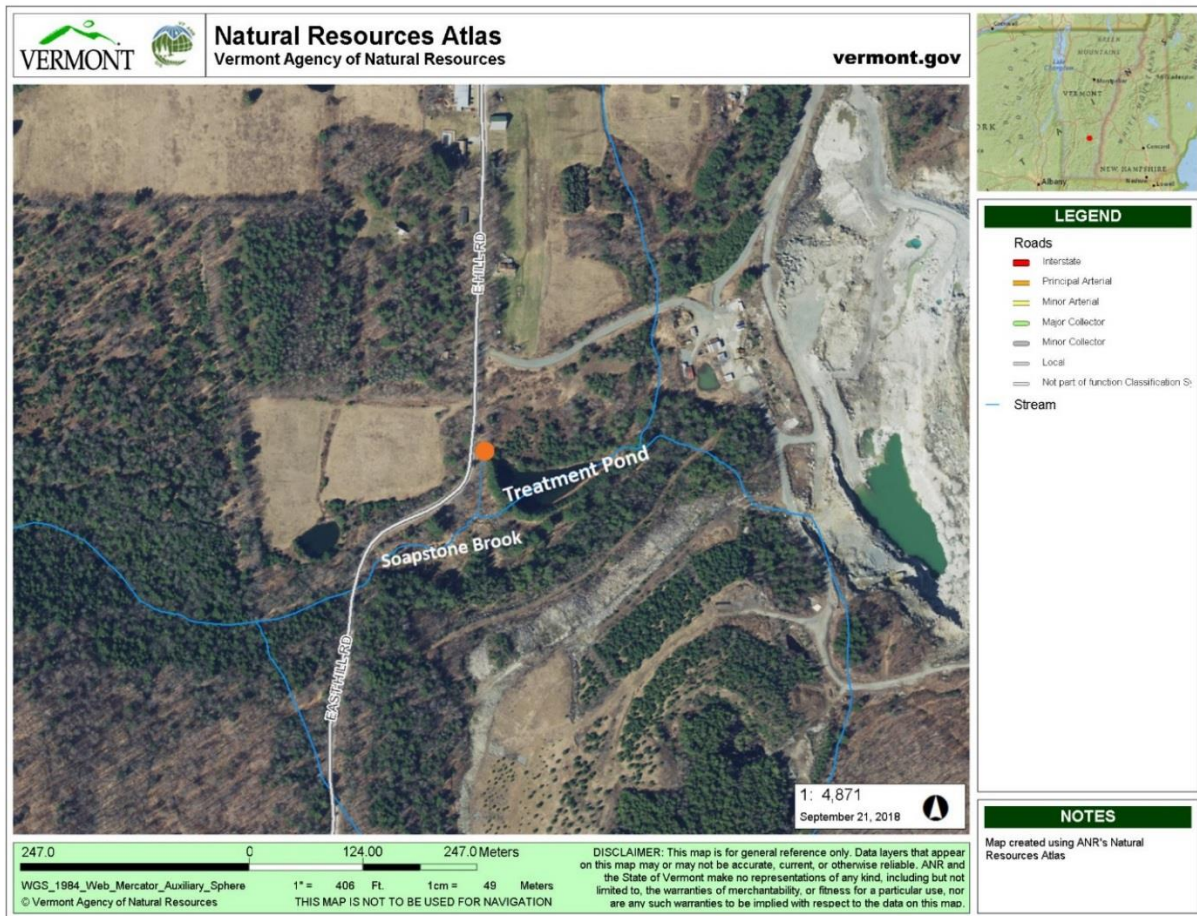


Figure 1. Location of outfall (Orange dot) below Argonaut Mine treatment pond on unnamed tributary to Soapstone Brook.

II. Description of Discharge

The facility is engaged in the mining of Talc.

III. Limitations and Conditions

The draft permit contains limitations Turbidity and pH. It also contains monitoring requirements for flow and Arsenic. The effluent limitations of the draft permit and the monitoring requirements may be found on the following pages of the draft permit:

Effluent Limitations:	Page 2-3 of 17
Monitoring Requirements:	Pages 2-3 of 17

IV. Statutory and Regulatory Authority

A. Clean Water Act and NPDES Background

Congress enacted the Clean Water Act (CWA or Act), “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” CWA § 101(a). To achieve this objective, the CWA makes it unlawful for any person to discharge any pollutant into the waters of the United States from any point source, except as authorized by specified permitting sections of the Act, one of which is Section 402. CWA §§ 301(a), 402(a). Section 402 establishes one of the CWA's principal permitting programs, the National Pollutant Discharge Elimination System (NPDES). Under this section of the Act, the U.S. Environmental Protection Agency (EPA) may “issue a permit for the discharge of any pollutant, or combination of pollutants” in accordance with certain conditions. CWA § 402(a). The State of Vermont has been approved by the EPA to administer the NPDES Program in Vermont. NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. CWA § 402(a)(1) - (2).

Section 301 of the CWA provides for two types of effluent limitations to be included in NPDES permits: “technology-based” limitations and “water quality-based” limitations. CWA §§ 301, 303, 304(b); 40 CFR Parts 122, 125, 131. Technology-based limitations, generally developed on an industry-by-industry basis, reflect a specified level of pollutant-reducing technology available and economically achievable for the type of facility being permitted. CWA § 301(b). As a class, WWTFs must meet performance-based requirements based on available wastewater treatment technology. CWA § 301(b)(1)(B). The performance level for WWTFs is referred to as “secondary treatment.” Secondary treatment is comprised of technology-based requirements expressed in terms of BOD5, TSS and pH; 40 C.F.R. Part 133.

Water quality-based effluent limits, on the other hand, are designed to ensure that state water quality standards are achieved, irrespective of the technological or economic considerations that inform technology-based limits. Under the CWA, states must develop water quality standards for all water bodies within the state. CWA § 303. These standards have three parts: (1) one or more “designated uses” for each water body or water body segment in the state; (2) water quality “criteria,” consisting of numerical concentration levels and/or narrative statements specifying the amounts of various pollutants that may be present in each water body without impairing the designated uses of that water body; and (3) an antidegradation provision, focused on protecting high quality waters and protecting and maintaining water quality necessary to protect existing uses. CWA § 303(c)(2)(A); 40 C.F.R. § 131.12. The applicable water quality standards for this permit are the 2017 Vermont Water Quality Standards (Environmental Protection Rule, Chapter 29a).

A permit must include limits for any pollutant or pollutant parameter (conventional, non-conventional, toxic, and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water quality standard, including narrative water quality criteria. See 40 CFR §122.44(d)(1). An excursion occurs if the projected or actual in-stream concentration exceeds the applicable criterion. A NPDES permit must contain effluent limitations and conditions in order to ensure that the discharge does not cause or contribute to water quality standard violations.

Receiving stream requirements are established according to numerical and narrative standards

adopted under state law for each stream classification. When using chemical-specific numeric criteria from the State's water quality standards to develop permit limits, both the acute and chronic aquatic life criteria are used and expressed in terms of maximum allowable in stream pollutant concentrations. Acute aquatic life criteria are generally implemented through maximum daily limits and chronic aquatic life criteria are generally implemented through average monthly limits.

Where a state has not established a numeric water quality criterion for a specific chemical pollutant that is present in the effluent in a concentration that causes or has a reasonable potential to cause a violation of narrative water quality standards, the permitting authority must establish effluent limits in one of three ways: based on a "calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and fully protect the designated use"; on a "case-by-case basis" using CWA Section 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or, in certain circumstances, based on an "indicator parameter." 40 CFR § 122.44(d)(1)(vi)(A-C).

The state rules governing Vermont's NPDES permit program are found in the Vermont Water Pollution Control Permit Regulations (Environmental Protection Rule, Chapter 13).

1. Reasonable Potential Determination

In determining whether this permit has the reasonable potential to cause or contribute to an impairment, Vermont has considered:

- 1) Existing controls on point and non-point sources of pollution as evidenced by the Vermont surface water assessment database;
- 2) Pollutant concentration and variability in the effluent as determined from the permit application materials, monthly discharge monitoring reports (DMRs), or other facility reports;
- 3) Receiving water quality based on targeted water quality and biological assessments of receiving waters, as applicable, or other State or Federal water quality reports;
- 4) Toxicity testing results based on the Vermont Toxic Discharge Control Strategy, and compelled as a condition of prior permits;
- 5) Available dilution of the effluent in the receiving water, expressed as the instream waste concentration. In accordance with the applicable Vermont Water Quality Standards, available dilution for rivers and streams is based on a known or estimated value of the lowest average flow which occurs for seven (7) consecutive days with a recurrence interval of once in ten (10) years (7Q10) for aquatic life and human health criteria for non-carcinogens, or at all flows for human health (carcinogens only) in the receiving water. For nutrients, available dilution for stream and river discharges is assessed using the low median monthly flow computed as the median flow of the month containing the lowest annual flow. Available dilution for lakes is based on mixing zones of no more than 200 feet in diameter, in any direction, from the effluent discharge point, including as

applicable the length of a diffuser apparatus.

- 6) All effluent limitations, monitoring requirements, and other conditions of the proposed draft permit.

The Reasonable Potential Determination for this facility was waived due to the size and nature of the discharge. The memorandum detailing this decision is attached to this Fact Sheet as Attachment A.

B. Anti-Backsliding

Section 402(o) of the CWA provides that certain effluent limitations of a renewed, reissued, or modified permit must be at least as stringent as the comparable effluent limitations in the current permit. EPA has also promulgated anti-backsliding regulations which are found at 40 C.F.R. § 122.44(l). Unless applicable anti-backsliding exemptions are met, the limits and conditions in the reissued permit must be at least as stringent as those in the current permit.

V. Description of Receiving Water

The receiving water for this discharge is an unnamed tributary of Soapstone Brook, a designated Cold-Water Fish Habitat. At the point of discharge, the river has a contributing drainage area of 0.41 square miles. The summer 7Q10 flow of the river is estimated to be 0.037 cubic feet per second (CFS) and the summer Low Median Monthly flow is estimated to be 0.141 CFS. The instream waste concentration at the summer 7Q10 flow is 0.66 (66%) based on a variable average flow from the Argonaut mine of 0.71 CFS.

VI. Facility History and Background

Imerys Talc Vermont, Inc. (previously Luzenac America) owns and operates the Argonaut Mine, a talc mining operation in Ludlow, Vermont. Normal mine operation typically occurs from March through November, but the facility is permitted for year-round discharge. Process water is the result of storm events and, to a lesser extent, groundwater infiltration. The Argonaut treatment system consists of two settling ponds. When necessary, arsenic treatment via precipitation with ferric sulfate is carried out in pond #1.

During normal mine operations, water collected in the underground portion of the mine is sent to the Rainbow Mine (NPDES permit VT0001163) following treatment with ferric sulfate, while runoff from immediate haul roads and the mine yard is collected in Argonaut settling pond #1 and conveyed by pipeline to the Argonaut #2 settling pond. During large storm events and spring melt and start-up when the pumps sending water to the Rainbow mine cannot handle the full flow, water from the underground basin is also sent to the Argonaut ponds. Because discharge is based on storm events, flow can average from a few GPM to 100 GPM based on the event and duration.

VII. Permit Basis and Explanation of Effluent Limitation Derivation

This permit was evaluated under the 2017 Vermont Water Quality Standards

- A. **Flow** – The draft permit does not contain a flow limitation due to the variability of the volume of the discharge. However, an estimation of flow on the days that quarterly sampling occurs is required. This is unchanged from the previous permit. A precipitation measurement must also be taken for the storm event that triggers the discharge that is sampled.

B. **Conventional Pollutants**

1. **pH** – The pH limitation remains at 6.5 - 8.5 Standard Units as specified in Section 29A-303(6) in the Vermont Water Quality Standards. Monitoring remains at quarterly. This is the same limit and frequency as the previous permit.

C. **Non-Conventional and Toxics**

1. **Turbidity** – The draft permit contains a turbidity limitation of 10 N.T.U. with sampling once per quarter. This limit is based on previous Vermont Water Quality Standards for a Class B water and maintained due to Antibacksliding regulations in Section 402(o) of the Clean Water Act.
2. **Arsenic** - In September 1993 Luzenac (currently Imerys Talc) proposed to increase the extraction rate at the Argonaut mine. During the past permitting period, the Department had received information that arsenic was present in some of the geologic formations associated with talc ore in this area of Vermont. Therefore prior to issuing approval (through the Act 250 process) for the increased extraction, the Department required Luzenac to conduct an environmental assessment of the mining operations and the potential for arsenic contamination. This assessment revealed that the concentration arsenic in this discharge was above Water Quality Standards and Luzenac proposed a ferric sulfate addition treatment system to achieve compliance with the arsenic standard. The Department issued a 1272 Order mandating a time frame for implementing site improvements, installing the ferric sulfate treatment system, and achieving compliance with the Water Quality Standard for arsenic, and approved the increased extraction.

Beginning with the discharge permit issued January 5, 2002, Arsenic monitoring was supplemented with special conditions requiring the comparison of upstream, downstream, and effluent samples in order to assess compliance with the Vermont Water Quality Standard for Arsenic. This permit maintains these conditions as well as the quarterly monitoring requirement.

3. **Priority Pollutant Metals** – Because of the potential for additional metals to be present in effluent, the draft permit includes a new annual requirement for monitoring Priority Pollutant Metals (Ag, As, Sb, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ti, Zn). Samples should be taken during the month of March, April, or May at a time of normal mine operation (e.g., not during startup/spring melt) with results submitted with the quarterly monitoring report due June 15th of each year.

D. Special Conditions

1. **Arsenic Monitoring and Compliance** - Special Condition I.A.2 specifies the sampling locations and parameters for monitoring Arsenic in order to determine compliance with Conditions I.A.3 and I.A.4.
2. **Pond Maintenance** - Special Condition I.A.5 requires the permittee to clean the settling ponds as necessary to maintain the designed treatment specifications and to detail any maintenance of the pond on the quarterly report form.
3. **Electronic Reporting** - The EPA recently promulgated a final rule to modernize the Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The final rule requires the inclusion of electronic reporting requirements in NPDES permits that become effective after December 21, 2015. The rule requires that NPDES regulated entities that are required to submit discharge monitoring reports (DMRs), including majors and nonmajors, individually permitted or covered by a general permit, must do so electronically after December 2016. The Secretary has created an electronic reporting system for DMRs and has recently trained facilities in its use. As of December 2020, these NPDES facilities will also be expected to submit additional information electronically as specified in Appendix A in 40 CFR part 127.
4. **Reopener** - This draft permit includes a reopener whereby the Secretary reserves the right to reopen and amend the permit improve the treatment of this discharge or reinstitute the operation of the arsenic removal treatment system in order to prevent a violation of Water Quality Standards in the receiving water.
5. **Laboratory Proficiency Testing** - To ensure there are adequate laboratory controls and appropriate quality assurance procedures, the Permittee shall conduct an annual laboratory proficiency test for the analysis of all pollutant parameters performed within their facility laboratory and reported as required by their NPDES permit. Proficiency Test samples must be obtained from an accredited laboratory. Results shall be submitted to the Secretary by December 31, annually. The first proficiency test results required under this permit are due by December 31, 2019.

A. Reasonable Potential Analysis

The Secretary has waived the RPD requirement due to the size and nature of the discharge. The memorandum detailing this decision is attached to this Fact Sheet as Attachment A.

VIII. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit was from **October 10 through November 13, 2018** during which time interested persons may submit their written views on the draft permit.

Comments were received and a Responsiveness Summary was prepared to explain the changes made to the final permit. The Responsiveness Summary is attached to this Fact Sheet as ATTACHMENT B.

ATTACHMENT A

Agency of Natural Resources Department of Environmental Conservation

Watershed Management Division
1 National Life Drive 2 Main
802-828-1535

MEMORANDUM

To: Amy Polaczyk, Wastewater Program (WWP)

From: Rick Levey, Monitoring, Assessment and Planning Program (MAPP) *Rick Levey 09/20/2018*

Cc: Pete LaFlamme, Director, (WSMD)
Jessica Bulova, Section Supervisor, Wastewater Program
Ethan Swift, Manager, MAPP

Date: September 20, 2018

Subject: Imery's Talc – Argonaut Mine Reasonable Potential Determination Decision

Facility:

Imery's Talc – Argonaut Mine
Permit No. 3-0348
NPDES No. VT0001023

Hydrology for Imery's Talc – Argonaut Mine:

Flow: Variable-average = 0.046 MGD (0.71 cfs)
7Q10 = 0.037 cfs
IWC-7Q10 (using average flow) = 0.66

Receiving Water:

Trib. to Soapstone Brook, Ludlow, VT
Location: 043.36513 / 072.67455

MAPP has evaluated the request to waive the Reasonable Potential Determination for the Imery's Talc - Argonaut Mine and has determined that a full determination is not necessary due to the size and nature of the discharge. The receiving water is Unnamed Tributary to Soapstone Brook, which is classified as Class B (2) and is designated a Cold-Water Fish Habitat. At the point of discharge, the brook has a drainage area of 0.41 square miles. There are no permitted discharges upstream of this discharge.

The Imery's Talc – Argonaut Mine is a facility engaged in the mining of talc. Process water is the result of storm events and/or groundwater infiltration. The Argonaut Mine treatment consists of two settling ponds, when necessary arsenic treatment via precipitation with ferric sulfate is carried out in the first settling pond. The permit contains quarterly monitoring for flow, arsenic, turbidity and pH. There are limitations for turbidity and pH.

Quarterly monitoring records from 2012 – 2017 indicate that the average effluent concentration for arsenic was 0.024 mg/L-As (24 µg/L) and the maximum value observed was 0.06 mg/L-As (60 µg/L). These concentrations are significantly lower than the Vermont Water Quality Standards (VWQS) chronic (0.150 mg/L-As) and acute (0.340 mg/L-As) criteria to protect Aquatic Biota.

Quarterly monitoring records for the same period indicate that the maximum downstream concentration in the Trib. to Soapstone Brook for arsenic was 0.02 mg/L-As. Monitoring data from 2012 – 2017 indicate that arsenic values are very unlikely to exceed VWQS more stringent chronic criteria of 0.150 mg/L-As.

The draft permit limits and monitoring requirements will ensure that the Unnamed Tributary to Soapstone Brook surface waters maintain compliance with VWQS. Annual priority metal sampling is included as a monitoring requirement in the draft permit.

Considering this factor, MAPP concurs with the Wastewater Program that this facility and its discharge as currently operated and permitted, does not have the potential to cause measurable change in the receiving water.

ATTACHMENT B

RESPONSIVENESS SUMMARY for NPDES Discharge Permit #3-0348 Imerys Talc Vermont Argonaut Mine Direct Discharge

The above referenced permit was placed on public notice for comment from a period of October 10, 2018 through November 13, 2018. This is a renewal permit.

Comments on the draft permit were received during the public notice period. The following is a compilation of the comments and the Agency's responses to those comments. A copy of any or all comments received can be obtained by contacting the Agency's Watershed Management Division at (802) 828-1535.

COMMENT: We need a correction on page 4. All the monitoring requirements here are quarterly, but on page 4, under reporting, it says we are required to submit monthly. The next sentence refers to quarterly again. Could you please correct if this is indeed a typo?

RESPONSE: This was a typo and was corrected in the final permit. It now reads "The Permittee is required to submit quarterly reports of monitoring results on Discharge Monitoring Report (DMR) form WR-43".

COMMENT: Regarding page 7, section c. I do believe this section just applies to waste water treatment facilities, is this correct? I'm much more used to seeing section d on page 8 as our non-compliance notification procedure.

RESPONSE: Section II.A.2.c. was removed from the final draft as it only applies to facilities with the potential to discharge *E. coli*.

COMMENT: On page 7 of the fact sheet, it references lab proficiency testing. We sub all of the testing out to Endyne, so would they be required to submit the proficiency test results, or would we need to ask for them from them and submit to you?

RESPONSE: Condition I.D.1 of permit 3-0348 requires "The sampling, preservation, handling, and analytical methods used shall conform to the test procedures published in Title 40 of the Code of Federal Regulations (C.F.R.) Part 136.". The approved method for pH measurement allows for a 15-minute hold time and therefore it is not appropriate to send out a pH sample for analysis. The permittee must ensure this hold time is respected either by performing the pH analysis themselves or contracting a laboratory to perform the analysis within 15-minutes of sample collection. If the permittee performs the analysis, annual proficiency testing is required beginning in 2019. If an onsite contractor performs the testing, they must be able to provide proof of certification or conduct yearly proficiency tests.