Vermont Agency of Natural Resources
Department of Environmental Conservation
Solid Waste Management Program

**PUBLIC COMMENT RESPONSIVENESS SUMMARY**
**May 5, 2010**

Omya Inc.
Verpol Site Tailings Management Facility Certification
Whipple Hollow Road
Florence, Vermont

A draft Certification for the Verpol Site Tailings Management Facility was issued on December 18, 2009. The public comment period ended on January 29, 2010. A public informational meeting to receive and record oral comments was held in Pittsford, Vermont, on January 14, 2010. The program received a number of verbal comments during the meeting, and three sets of written comments during the open comment period. Based on the comments received and the Secretary's own motion, a number of changes to the final certification were made; all noted at the end of this Responsiveness Summary.

Similar comments originating from different commenters were grouped together for a response; and comments, particularly those received verbally at the public meeting, have been paraphrased for brevity.

**COMMENTS RECEIVED:**

Comment 1: Was the Act 250 permit that precipitated the entire Omya solid waste certification process ever obtained?

Response: Omya applied for a new waste stockpile permit on November 27, 2002. That application was the subject of a public hearing. At the conclusion of the hearing, Omya was directed by the Commission in a Recess Order to determine whether or not the deposition of stockpiled materials required a Solid Waste Certification from the Agency of Natural Resources. After a lengthy review, it was determined that the answer was yes.

OMYA then redesigned the proposed Tailings Management Facility plan to include a lined landfill. The Act 250 application was filed on February 5, 2010 with the Act 250 District 1 Commission. As of this date, the application is under review by the District Coordinator.

Comment 2: Does the Certification require permanent closure of the Loveland Tailings Management Area (TMA)? Will tailing be disposed of in the unlined TMAs after the lined TMF cell is built?

Response: Most of the Loveland TMA will constitute Phase 1, Cells 1 and 2A of the proposed lined Tailing Management Facility (TMF). Therefore, the Loveland TMA will not be capped and vegetated, but the existing tailings in Loveland shall be graded and compacted in preparation for the synthetic lining system to be installed above.

There may be some quantity of dewatered tailings that will be disposed of in the Kane and Drake TMA after construction of the first lined cell, depending on the timing of construction. However, if disposal occurs at all, it may take place only prior to October 21, 2010. During this transition phase, the unlined Kane and Drake TMA will be graded, compacted, and seeded, and additional tailings may be required to obtain necessary final slopes, even as Phase 1, Cell 1 is operational. Under conditions of the certification, disposal of tailings in an unlined TMA must cease by October 21, 2010.

Comment 3: There is a condition in the Certification concerning "depth to groundwater." Are the tailings in groundwater? Please explain.

Response: In some areas of the TMAs, tailing have been disposed of in groundwater. This occurred many years ago, when the quarry holes were abandoned and tailings began to be disposed of in them. Tailings at the bottom of the Loveland TMA, for instance, are in groundwater. Condition 10 of the certification requires that the seasonal groundwater elevation be determined within the Loveland TMA, and that the base of the new liner system be two feet, or more, higher than this elevation. The "as-built" plans that show the actual construction details are required to contain a record of these elevations.

Comment 4: Finding G contains the dates that the Dolomite and Kane and Drake TMAs must be closed, but there is no stated date that the Loveland TMA must be closed.

Response: As explained in the response to Comment 2, most of the Loveland TMA is not being capped as upon cessation of unlined TMA operations. Instead, the TMA will be dewatered, reconfigured, regraded, and lined to form the base of Phase 1, Cell 1 and Cell 2A of the TMF. However, in order that this is made clear, a new condition in the full certification shall preclude disposing of tailings in the unlined TMAs after the expiration of the Interim Certification (IC), October 21, 2010.

Comment 5: The Draft Interim Certification does not adequately address the contaminated waste in the unlined pits and its impact on human health and the environment…The Draft Certification must require a more thorough assessment of current and future contamination on-site and off-site before authorizing Omya's waste disposal facility...Omya's own monitoring reports reveal that arsenic contamination both on-site and off-site may present a potential health concern.

Response: In determining whether the entire Verpol facility poses a risk of harm to public health, or will have an unreasonable impact of the environment, the Agency relied on the *Assessment of the Environmental and Public Health Impacts of Omya's Operations in Florence, Vermont: Integrated Report (*"Section 5 Study"), the site characterization information contained in the certification application, and the monitoring data and reports submitted since the 2008 Section 5 Study was completed. The application and supplemental information includes a characterization of the beneficiation waste, a study of the geology and hydrogeology of the Verpol site, environmental monitoring data, toxicological analysis of beneficiation waste, a numerical groundwater fate and transport model, a revised environmental monitoring plan, and a facility management plan. The information available is comprehensive and sufficient in scope to assess current and future risks, and a more thorough assessment is not necessary. The Draft Certification incorporates the Section 5 Study and other supplemental information by reference.

Specifically addressing arsenic in groundwater at the Verpol site, several on-site monitoring wells immediately downgradient of the TMAs have had concentrations of arsenic above the 10.0 µg/l Groundwater Enforcement Standard (GES), and several other downgradient wells have arsenic concentrations above background levels. Based on site characterization work, the arsenic concentrations are believed to be caused by the oxygen reducing conditions of the groundwater, which, in turn, mobilizes the arsenic inherent in the bedrock or tailings. Arsenic concentrations generally decrease with distance downgradient of the TMAs, but the elevated results are not as geographically uniform as those of iron and manganese.

Consistent with Groundwater Protection Rule and Strategy Section 12-801(1), the applicable groundwater quality compliance point for the Verpol facility is the Omya property boundary. One downgradient off-site monitoring well, Well V, has had elevated arsenic concentrations. Well V has been sampled for total and dissolved arsenic (as part of a larger suite of parameters) on four occasions since Spring 2008. Total arsenic concentrations were below the 10.0 µg/l GES in the Spring 2008 and Fall 2009 sampling events, at the GES in the Fall 2008 sampling, and above (10.4 µg/l) in the Spring 2009 sampling. None of the four dissolved arsenic results were above the GES. Based on these analytical data, the Secretary does not consider the groundwater quality to have reached or exceeded the arsenic standard.

Well V is located on the north side of Whipple Hollow Road. It is flanked by Well T and Well U to the west, and Well D to the east on the south side of Whipple Hollow road. None of these wells have shown elevated levels of arsenic. Approximately 500 feet due south of Well V is Well E located on the Verpol site, and this well has had arsenic results consistently above the GES.

Well V and Well E are greater than 3000 feet from the closest (Loveland) TMA, and are not in the inferred flowpath of groundwater emanating from the TMAs. That is, it is highly unlikely that the specific cause of elevated arsenic in Wells V and E is the existence of the tailings in the TMAs, rather some other Verpol site condition or past use, or simply a labile source of arsenic in the bedrock in this area.

Regardless, the Agency agrees with the commenter that the existence of the Verpol operations has caused slight, elevated arsenic concentrations, particularly adjacent and downgradient of the TMAs. This effect is acknowledged in the Section 5 report, subsequent monitoring reports and the Fact Sheets accompanying the Interim Certification and Full Certification. The Agency is not "minimizing the contamination," but reiterates its findings that adequate site characterization and monitoring have been performed to understand the potential impacts to the environment and to human health, and that the TMA facility is, and TMF facility will be, in conformance with the Groundwater Protection Rule and Strategy.

Comment 6: Similar to Comment 5 above, however, as it concerns iron and manganese in the groundwater.

Response: As with arsenic, there are clearly elevated concentrations of iron and manganese in the groundwater downgradient of the TMAs. Both of these metals are naturally occurring in groundwater in Vermont.

Background concentrations of manganese in the area range from less than 1 µg/l to 10 µg/l. Concentrations within the Verpol facility area range from non-detectable to approximately 3300 µg/l, with the highest concentrations found in Well B, immediately downgradient of the Kane and Drake TMA. No concentrations of manganese above the primary GES of 840 µg/l, or concentrations of dissolved manganese above the secondary GES of 50 µg/l, have been have been detected in the off-site monitoring wells (Wells T, U, and V). In four rounds of sampling of the off-site wells, total manganese has been detected slightly above the secondary GES twice. The Agency concludes that the data indicate that the TMAs are not causing the manganese GES to be exceeded.

Background concentrations of iron in the area are more variable, spatially and chronologically, which is not unusual for iron in groundwater in Vermont. Monitoring of the upgradient monitoring wells, C-2 and I, during the Section 5 Study indicated dissolved iron concentrations in a range of 400 µg/l - 530 µg/l. More recent results indicate that iron concentrations in these monitoring wells are now less than 200 µg/l. Further indicative of iron's inconsistency, many of the residential drinking water supplies in the Verpol Site vicinity have had historic concentrations of dissolved iron in excess of the secondary GES of 300 µg/l. Based on the established groundwater flow direction, these water supplies, including the Brod, Eugaire house and barn, Ferraro, Florence Municipal Well, and others, are clearly not impacted by Omya's tailings management areas. Chrusciel spring, Fox Rock spring, and the Post Office Swale surface water monitoring locations – all which are not in the groundwater flowpath from the TMAs - have also had exceedences of the secondary GES for iron. Iron is ubiquitous in the area's groundwater.

Concentrations within the Verpol facility area range from 100-200 µg/l to nearly 30,000 µg/l, with the highest concentrations found in Well B, immediately downgradient of the Kane and Drake TMA. Clearly, while iron in groundwater occurs naturally in elevated concentrations within the Verpol property, the concentrations downgradient of the TMAs are further elevated due to the presence of the tailings. Those monitoring wells closest and directly downgradient of the TMAs have the highest iron concentrations, and the concentrations decline in general proportion to the distance from the TMAs along the groundwater flowpath.

Iron has been detected in off-site Well V consistently above the secondary GES, with a maximum result of 2660 µg/l in the fall of 2008. Given the even greater iron levels in nearby on-site Wells D, E and 10 and the East Upper Settling Basin, it can be inferred that concentrated dissolved iron is moving in the groundwater from the northeast Verpol property to north of Whipple Hollow Road. However, this area is not directly downgradient, and not proximal, of the TMAs. This suggests that the elevated iron in this area is wholly or partially due to another source, such as the East Plant itself causing a reducing environment in groundwater, or the presence of the East Upper Settling Basin, or prior land use, or simply a labile source of iron. For example, in Fall 2009, groundwater in on-site monitoring wells 96-1 (362 µg/l), 96-2 (280 µg/l), and M (564 µg/l), presumably in the flowpath from the TMAs, had dissolved iron concentrations less than those in off-site Well V (1400 µg/l).

With regards to iron, the Secretary continues to find that the facility is in compliance with the Groundwater Protection Rule and Strategy based on:

- the variable and often-elevated of concentrations of iron naturally occurring in the Florence area, as evidenced by the off-site drinking water and spring results;

- the decline of iron concentrations as the distance decreases from the TMAs along the groundwater flowpath.

- the probability that the elevated off-site iron concentrations are caused, in part, to a source or sources other than the TMAs.

Comment 7: Aminoethylethanolamine (AEEA) has been found in the groundwater on-site and off-site of the Omya facility and may present a potential health concern…AEEA has been detected in the Chrusciel Spring to the east of Omya's facility…ANR should not certify this permit until there is adequate, ongoing monitoring both on-site and off-site.

Response: The Agency does not find AEEA in the groundwater at the Verpol site to be a violation Groundwater Protection Rule and Strategy.

On site, AEEA has only been detected in groundwater immediately downgradient of the Kane and Drake TMA and Settling Cells. AEEA is rapidly biodegradable with a short (<30 day) half-life in groundwater, and because of this characteristic, the chemical has not been detected in monitoring wells further downgradient from the TMAs, and has not been detected in off-site wells. The actual sampling results are empirical confirmation of the conclusions of the contaminant transport models prepared as part of the interim (2006) and full (2009) certification applications. The contaminant transport models conclude that concentrations of AEEA above the 20 µg/l Vermont Health Advisory will not migrate any appreciable distance from the TMAs. AEEA migration from the lined TMFs is even less likely given that the leachate is effectively collected and recirculated through the beneficiation process.

AEEA has been detected twice (May and August 2007) in the Chrusciel Spring, a non-potable water source to the east of the Verpol Site, at a concentration well below the Vermont Health Advisory level of 20 µg/l. The chemical has not been detected in the Spring in twelve consecutive sampling events since that time. Although there is no known hydrogeologic connection between the TMAs/TMF and the Chrusciel Spring, there was some potential pathway for the chemical to be transported to the spring. The likely pathway was associated with leakage from the Pittsford Italian Quarry. Changes in surface water management and changes in flotation reagent chemistry render it very unlikely that AEEA will be detected off-site in the future. To confirm, the Chrusciel Spring will continue to be monitored for AEEA under this full certification.

Additionally, the concentration of AEEA in the flotation reagent matrix has decreased from 1.5% at its peak, to 0.6% at the present, further limiting any potential health risks from the chemical in groundwater.

Comment 8: The ANR should not certify this permit until it evaluates the level of risk to human health and the environment posed by the groundwater contamination resulting from Omya's disposal of waste. ANR should not permit changes to the Monitoring Plan that decrease the level of monitoring when the full extent of the groundwater contamination is not known.

Response: A comprehensive evaluation of the environmental and human health risks from the Verpol Site has been completed. The commenter is urged to read the above-referenced Section 5 Study. The study concluded that the existing unlined TMAs are not a threat to human health or the environment. Relying significantly on this work, the Agency issued an interim certification for operation and closure of the TMAs. The conclusions of the Section 5 Study remain valid and applicable to the certification of the lined TMFs.

Revisions to the approved monitoring plan have come about as a result of a careful study of the Verpol site characterization, tailings chemistry, and historic environmental sampling results. The Verpol site is much better understood, hydrogeologically, than prior to the comprehensive Section 5 Study, and the ensuing environmental monitoring has increased that understanding with every sampling event. The data effectively indicate ground and surface water flow patterns and contaminant levels. Many of the parameters and locations sampled during the data-gathering stage of the Section 5 Study are now known to be redundant or not germane to a long term, routine monitoring program. Each proposed change to the monitoring program was accompanied by a justification for the modification and thoroughly considered by the Agency prior to being approved.

Comment 9: The Draft Certification does not take action to address the existing contaminated waste in the unlined pits below the newly constructed lined waste management facilities…To prevent contamination, and to meet the requirements of the Vermont Solid Waste Management Rules, ANR conditioned Omya's future operation on the construction and use of lined facilities…The ANR has not studied the impact of the lined waste management facilities on the mobilization of arsenic…Moreover, the Section 5 Study found that the movement of iron, manganese, and arsenic may increase after a lined facility is placed on the unlined TMAs.

Response: Conditions in the certification require closure and post-closure care and monitoring of the unlined TMAs. Based on the ample evidence contained in the various site characterization efforts, and supported by the ongoing monitoring program, the Agency has determined that no other actions are needed in regards to the existing TMAs.

Subchapter 13 of the Solid Waste Management Rules require the installation of liner and leachate collection systems for mineral processing waste facilities, unless the Secretary waives this requirement based on a characterization of the waste itself. Omya did not apply for a liner waiver, but instead chose to apply for

certification of a lined facility, in full conformance with the Rules. The Agency processed that certification application.

Increased mobility of iron, manganese, and arsenic is a possibility after the construction of the TMF, but the Agency has concluded that attempting to quantify this possibility is not warranted, if even possible.

The conclusion of the Section 5 Study is that the impermeability of the tailings in the TMAs is likely causing a reduction of oxygen in the groundwater at the Verpol Site, and those reducing conditions are then causing dissolution of iron, manganese, and arsenic from bedrock or tailings. While the theory is credible, proving the assumptions, or calculating the effects of a lined cell, if any, is impossible. Research in this area is limited and far from conclusive. The infiltration of precipitation through the closed, capped TMAs is severely restricted regardless of whether a lined landfill is "piggy-backed" over some areas. The amount of recharge to the groundwater impeded by the TMF liner system as compared to the capped TMAs will be negligible as it relates to metals mobility. The approved monitoring program will allow the Agency to monitor any changes in groundwater quality and react accordingly.

Comment 10: Another shortfall of the Draft Certification is the use of contaminated waste (tailings) in the unlined pits as the infiltration layer below the lined waste management facilities.

Response: The term "infiltration layer" originated with the Federal Landfill Rules (40 CFR Part 258) and was adopted for use in the Vermont Solid Waste Management Rules (Rules) within the definition of final cover systems for landfills. An infiltration layer in a cover system is the component that limits the infiltration of precipitation into the waste mass. It may be low hydraulic conductivity soil, a synthetic membrane, or a combination of the two. References to an infiltration layer and "equivalent performance" contained in the preceding interim certification process relate to the capping system of the TMAs.

Subchapter 13 of the Rules does not specify a minimum vertical isolation distance from the bottom of a mining or mineral processing waste disposal facility to the underlying groundwater. The application for certification must demonstrate that the distance is sufficient to assure that an emission or discharge from the facility will meet all applicable environmental and human health criteria. The Agency finds that a two-foot separation distance from the bottommost component of the lining system to the seasonal high groundwater is adequate to meet this performance standard. The robust body of site- and tailings characterization data has demonstrated that 25 or more years of tailings disposal in unlined disposal areas has not resulted in significant environmental impacts. These impacts will be further mitigated in the future by the incorporation of a liner system in the disposal areas, changes in flotation reagent chemistry, and the likely beneficial use of some portion of the tailings. In the Verpol TMF instance, the liner system itself offers a high degree of environmental protection, so that additional protection afforded by base soils are unnecessary. The two-foot thickness above the groundwater table required in the certification is to ensure dry, structurally sound base soils for proper construction of the liner system, and proper operation of the leachate collection system once the TMF is operational.

Comment 11: Omya's goal of selling the contaminated waste in the unlined pits is inconsistent with ANR's plan to close the unlined pits…ANR should not permit the TMF until it examines how the lined facilities will affect Omya's ability to reclaim the waste from the TMAs.

Response: The Agency disagrees that the potential for future reclamation of tailings from the TMAs has a direct bearing on the certification process of the lined TMF. The Agency is not aware of a feasible end use for the tailings that would compel the reclamation of the capped TMAs, particularly if the particular TMA is incorporated into a lined TMF. Regardless, if such a market developed, Omya could apply for a certification modification to exhume the tailings, and the Agency would react to such a proposal at the time. To do so beforehand, with no justified reason, is unwarranted.

Comment 12: Omya should build the lined facility in a different part of the site, and the ANR should require that Omya evaluate remedial alternatives for the waste remaining in the unlined TMAs.

Response: Omya performed a comprehensive study of all their properties in proximity to the Verpol Plan to determine the optimum site to replace the unlined TMAs after the interim certification period. Based on a number of factors, Omya chose to apply for certification of a lined tailings management facility on the Verpol property, and, for several

of the TMF phases, within the "footprints" of the unlined TMAs. While the Agency was continually informed of the progress of the siting study, and verified its conclusions, ultimately Omya decided where to site their future facility, and what the specific design would be.

If properly designed, the Agency has no concerns with siting the lined TMFs partially upon the unlined TMAs. To that effect, the application contained substantial and satisfactory geotechnical analyses and engineering that indicate that the proposed "piggyback" design of the TMF is stable and practicable. Generally speaking, it is preferable to develop a waste management facility to its maximum feasible capacity, if the alternative is developing a disposal facility on undeveloped land.

Finally, the site characterization studies performed on the Verpol site have, computer modeling, and tangible monitoring data have indicated no significant environmental or human health risk from the existence of the TMAs; therefore, the Agency has determined that no remediation of these areas is warranted.

Comment 13: The draft certification does not include a schedule or deadline for closure of the unlined TMAs.

Response: The interim certification expires on October 21, 2010, and by that date, placement of tailings in the unlined TMAs must cease. The Agency acknowledges that this requirement may not have been apparent in the draft full certification. The certification has been revised to explicitly require that, after October 21, 2010, all generated tailings be placed in the lined TMF, and that the remaining open TMA areas be capped and closed within the timeframes contained in the Rules. See Condition 7.

Comment 14: The final certification should require the closure of the Loveland pit.

Response: As explained in Responses 2 and 4 above, the Loveland TMA is incorporated into the design of Phase 1 of the TMFs. As such, the tailings in the Loveland TMA will be graded as form the base of the lined TMF. The Facility Management Plan and accompanying plan sheets represent this proposal, and the full certification incorporates by reference these documents. For additional clarity, please see the approved FMP and Plan Sheet 11 of 39.

Comment 15: The ANR should require complete closure of the Settling Cells.

Response: Similar to Response 13 above, the West Settling Cell will be incorporated into the base of TMF Phase 1, Cell. The East Settling Cell, as of this date, is "clean closed;" that is, all tailings (and incompetent rock) have been mechanically removed. As part of the approved TMF design the West Settling Cell will become a lined contingency tailings storage area and stormwater management basin. For additional details, please see the approved FMP and Plan Sheet 11 of 39.

Comment 16: The ANR should require complete cover system over the Kane and Drake quarry.

Response: As there may be some uncertainty as to the transition from the interim certification and the full certification, and the unlined to the lined areas, a new Condition (7) has be included in the full certification explicitly requiring the closure and capping of the Kane and Drake TMA. No tailings shall be disposed of in this unlined TMA after October 21, 2010, and capping will be required prior to 90 days after the cessation of operations, with the establishment of vegetation within four months of capping (depending on the season). Bear in mind that a portion of the Kane and Drake TMA, although closed and capped, will become the base of lined TMA Phase 1, Cell 2B.

Comment 17: Several comments were received regarding the agency's application of the groundwater public trust. Comments requested that ANR conduct a more thorough analysis before approving a certification of Omya's tailing management facility (TMF) at the Verpol Site.

Approval should be contingent upon addressing three main concerns:

a) The Draft Certification does not adequately address the contaminated waste in the unlined pits and its impact on human health and the environment.

b) The Draft Certification does not include a substantive public trust analysis of the groundwater impact of allowing continued contamination of Vermont's groundwater resources.

c) The Draft Certification does not require the closure and cover of all unlined pits and settling cells.

These main concerns were supplemented with comments summarized as follows:
Groundwater is contaminated with arsenic. Arsenic on-site is higher than background levels. There is evidence that the waste contained on-site is the cause of the elevated levels in GW, and ANR has failed to take action in the draft certification to address the elevated arsenic levels, in fact minimizes the contamination. ANR should not allow modifications to the Approved Monitoring Plan that could overlook potential contamination from Arsenic and AEEA, and the Section 5 study suggested the need for additional monitoring to understand the risk posed to human health and the environment.

Prior to issuing the final certification, ANR should require a remedial alternatives study for the wastes in the unlined pits to insure protection of human health and the environment. This evaluation should include a fate and transport model that evaluates the effect due to building the lined facility on top of the unlined pits.

Authorizing OMYA to contaminate groundwater is a violation of ANR's public trust duty. ANR should conduct a public trust analysis that is procedurally clear and accessible to the public to fulfill its public trust duty. The agency analysis of the public trust doctrine does not match the importance conveyed by the legislature in amending the law to elevate the importance of groundwater protection to 'put public interest in the resource above private interests.'

In summary, these comments suggest an abrogation of the state's responsibility to protect the public interest in maintaining a high quality groundwater resource.

Response: There is a fundamental disagreement between the agency and commenters on the effect of the language included in Act 199 of 2008, establishing groundwater as a public trust resource. The Agency agrees that Act 199 creates a statutory public trust designation in groundwater. The Agency does not believe that this designation incorporates the body of common law which has the purpose of restricting encroachments in surface water to ensure its navigability. This statutory designation of a public trust must be read in the context of the statutory and regulatory scheme for managing groundwater contained in Chapter 48.

The comments suggest that the only 'use' contemplated under the Chapter 48 is the use of groundwater as a source of water supply. The agency believes that if the general assembly made as radical a change to the management of groundwater quality as the comments suggest, the legislative intent would be codified in 10 V.S.A. Chapter 48. The

legislature chose not to remove the multiple management objectives for groundwater, which include "farming, dairy processing, and industrial uses". See 10 V.S.A. § 1390(2). The comment fails to take into account that once used, even for domestic purposes, water is contaminated to some degree and for most of Vermont the disposal on-site results in some impacts to groundwater.

The agency believes that the adoption of a statutory public trust in groundwater did not substantively alter the basic premise of the law: that uses of groundwater are variable; those variable uses require management of potential risk to groundwater quality through establishment of standards and criteria; and the groundwater protection rule and strategy represent the standard by which the agency determines whether an applicant has met its requirements under the public trust.

Finally, the findings contained in O through Q and the continuing obligations contained within conditions 30 through 36 are sufficient to ensure that this facility is not harming, and its continued operation will not adversely affect groundwater. For those reasons, we have concluded that the requirements of the public trust have been met.

Comment 18: The term "Verpol Plant" is misapplied to the West Plant in some instances. There is a West Plant and an East Plant that together comprise the Verpol Facility. It is suggested to change references to "Verpol Plant" to "Verpol Site".

Response: Agreed.

Comment 19: Minor revisions are suggested for Conditions 3H, 18, 19, 21, 22, 23, 37, 38, and 40 (described below) that would negate the need for a separate post-closure certification for the unlined TMAs, once the current interim certification expires.

Response: While all specific suggested revisions were not incorporated, the Agency has revised the full certification to incorporate and condition post-closure care of the TMAs. With the changes, it will not be necessary to separately certify the closed unlined TMAs to ensure their monitoring and maintenance after expiration of the current interim certification. One certification will permit the entire Verpol Site solid waste facility.

Comment 20: The term Tailings Management Areas (TMAs) should be revised to Tailing Management Area Facility or TMA Facility to be consistent with Condition 1 of the Interim Certification.

Response: The Agency disagrees. The Solid Waste Management Rules (SWMR) define "facility" as all of the land, structures, and appurtenances used for managing solid waste, and of which the Agency has regulatory oversight.

Finding of Fact (FoF) B of the Interim Certification characterizes the unlined disposal areas as "Tailings Management Areas or TMAs." Interim Certification Condition 1 characterizes the "Facility" as the Dolomite, Kane and Drake, and Loveland TMAs, and the Settling Cells. Now it has become more complicated as there is the "Tailings Management Facility," separate from the "Tailing Management Areas." The TMAs and Settling Cells constituted the original "Facility." The new Tailings Dewatering Facility is not regulated under the Solid Waste Management Rules and therefore is not part of the Facility. The surface water management system recirculates the water through the calcium carbonate beneficiation process, and although designed partially to manage run-off of the TMAs and TMFs, is not included in the Facility. The proposed TMFs are, of course, included in the Facility. All of this is to explain that for the purposes of this Certification, "Facility," used exclusively, refers to the entire solid waste management facility, as defined in full Certification Condition 1.

Comment 21: FoF F refers to "this interim certification," rather than "full certification" or simply "certification." Further, the references to the Section 5 Study have less bearing on the full certification or have been supplanted by additional data collected since the conclusion of the Study.

Response: The inclusion of the term "interim" was an oversight and will be removed from the final certification. The Agency believes that all of the bulleted items remain valid and are relevant. Elsewhere in the draft certification, fact sheet, or this responsiveness summary it is acknowledged that site characterization is an ongoing process, but that the majority of this work was performed during the Section 5 Study. The bulleted findings remain.

Comment 22: Regarding FoF H, tailings produced by the Tailings Dewatering Facility (TDF) have been 90% solids by weight as required by the IC. Only if the certification is issued will the solids be reduced to 85% for disposal.

Response: The Finding will be changed to reflect that tailings of 90% solids are currently being produced.

Comment 23: Regarding FoF J, use of the terms "…partially located on the existing Tailings Management Areas…," could be misinterpreted as the TMF is wholly located within the footprint of the former quarrying areas, and what Omya has represented to be the overall TMAs. This could be important as the Rutland County Solid Waste District Plan identifies the disposal areas as "Loveland, Kane & Drake, Dolomite and Pittsford Italian Quarries."

Response: If there is a misunderstanding between Omya and RCSWD of what constitutes the Facility for planning purposes, it should be decided upon between the two entities. The proposed TMF is located partially, albeit mostly, on the TMAs. The Finding is factual and will remain.

Comment 24: FoF K contains dated and irrelevant information pertaining to the background disclosure documentation and should not be included.

Response: The finding was included to inform the public as to previously documented violations and their current status relating to this certification application. Five environmental violations were disclosed during an interim certification process that was completed only 18 months ago, while, in turn, no past violations were disclosed during the full certification process. As explained in the Finding, the violations occurred more than five years before the full certification application was submitted. No change to the Finding.

Comment 24: The term "growth capacity" as used in FoF L is not defined in statute, rule, or elsewhere in the Certification, and should be substituted with the more understandable "maximum tailings generation rate." Also, the use of the term "asserts" to characterize Omya's anticipation of the potential beneficial use of tailings is a bit strong. Omya made a "projection" of a tailings quantity anticipated for such diversion.

Response: The term "growth capacity" has been informally adopted by the Solid Waste Management Program for inclusion in facility certification finding and conditions pertaining to fee payment. Growth capacity is the maximum amount of waste allowed to be managed by a facility per year. To remedy any confusion, "growth capacity" in the FoF has been changed to "maximum allowed disposal rate."

The application for certification contains a projection of the quantity of tailings generated and of tailings beneficially used during the first year of facility operations. The annual application fee to be paid was calculated on the net of these two figures. The application states that "the quantity disposed of in the TMF *will* (emphasis added) be reduced by a projected 22,375 tons…". Because the application contains the term "will" and the projected tonnage is used in tangible fee calculations, the Agency believes that "asserts" is appropriate.

Comment 25: Referring to Condition 6, Again, to Omya's knowledge the term "growth capacity" is not defined in statute, rule, or the Draft Certification, and thus its meaning is unclear.

Response: Agreed. See Response to Comment 22, above. "Growth capacity" has been changed to "maximum allowed disposal rate."

Comment 26: In Condition 9, it appears the original word "horizontal" should be changed to "vertical".

Response: Agreed. The condition requires a two-foot vertical distance between the bottom of the liner system and seasonal high groundwater.

Comment 27: Regarding Condition 10, consistent with Omya's November 12, 2009, request, the phrase "greater than 85% solids" should be changed to "85% solids or greater."

Response: Agreed. The condition shall be revised.

Comment 28: Certification application fees are based on a facility's "operating capacity" which the Program has historically interpreted to mean the amount of waste actually disposed per unit of time. For its current Interim Certification, Omya has already paid an application fee based on tailings to be disposed through October 21, 2010. Therefore, to prevent double-payment for the same tailings disposition, and consistent with the fee due date specified in FoF L, the application fee payment for the first year of the full Certification should be due on or before October 21, 2010.

Response: Agreed. Essentially, the application fee has been paid for the tailings disposed of in either the TMAs or TMF through October 21, 2010. The condition shall be amended.

Comment 29: It is suggested that the annual adjustment of closure and post-closure cost estimates for both the TMF and TMAs occur at the same time, resulting in preparation effort and cost efficiencies for Omya and review efficiencies for the Program. The suggested dates of adjustment and submittal should align with those currently required in IC Condition 12 (Adjustment by April 15, submittal by May 1.) Certification Condition 18 would supersede IC Condition 12.

Response: Agreed, in part. The date of annual adjustment of cost estimates for the facility (TMAs and TMF) shall be aligned. The specific date referenced in Certification Condition 18 is March 31, and not the dates contained in the Interim Certification

Comment 30: Condition 19 requires the submittal of a report summarizing Omya's efforts to market tailings for beneficial use, including quantities and end users. Omya requests that the requirement to identify end users be stricken, as this may be considered confidential business information.

Response: Agreed. With any beneficial use of a waste, the Agency has concerns that the practice is legitimate and will not result in an environmental or health threat, or create a nuisance. The condition will be revised to require that the report include summary of quantities and end uses of any marketed tailings.

Comment 31: It is suggested post-closure care of the TMAs be regulated with a single full certification also covering the TMF. Having one certification for the entire Facility results in reduced preparation effort and cost for Omya and increased review and process efficiencies for the Program and the public.

Response: Agreed. The certification will be amended to incorporate all aspects of post-closure care of the TMAs, once the IC has expired.

Comment 32: Regarding Condition 22, it is suggested that wording be inserted that would make the certification of closure requirement applicable to both the TMF and the TMAs. Although the IC requires closure of the TMAs prior to the date of expiration of the IC, certification of such closure does not need to be submitted to the Program until as late as 90 days following closure. Thus, without renewal of the IC, or the issuance of another certification covering post-closure care of TMAs, the IC could expire prior to the required submittal date leaving the Program no valid permit to enforce against should the certification of closure not be submitted timely.

Response: Agreed. The condition will be amended to require closure certification of either the TMF or a TMA within 90 days of completing closure. The condition (23) will supersede IC Condition 17.

Comment 33: The statement, "Metal samples shall not be filtered" in Condition 25 is unnecessary because the details concerning sampling and sample handling are fully addressed in the referenced monitoring plan.

Response: Agreed. The statement is inserted into all drinking water monitoring-related conditions as a simple reminder. The condition will be amended.

Comment 34: Condition 28 should be deleted because the surface water level and flow monitoring study already has been completed as indicated by the conclusions presented in Section 4 of the May 2009 Monitoring Report.

Response: Agreed. Since May 2009, surface water levels have been measured during routine sampling events rather than continuously. The condition will be amended to require only water level monitoring of the Pittsford Italian Quarry at the time of semi-annual environmental sampling.

Comment 35: Regarding the last sentence of Condition 29, it is not believed to be appropriate for a certification to require direct communication between a Permittee and a select group of non-governmental entities. In addition to directly providing a copy of any such future minor ASMP revision requests to the Town of Pittsford, Omya would be happy to post them on its "www.OmyaInVermont.org" web site.

Response: Agreed. Posting the requests to the Omya website is an appropriate method to communicate any requests to the public at large. The Certification shall be amended as such.

Comment 36: Conditions 32, 37, 38, and 40, and the unnumbered paragraph near the end of the Draft Certification beginning with "The Secretary's issuance . . .": The suggested revisions would make each of these requirements applicable to both the TMF Facility and the TMA Facility, helping to eliminate the need for a future stand-alone post-closure certification for the TMAs.

Response: Agreed in principal. The conditions of the certification will be amended as appropriate to combine regulatory requirements for both the TMAs and TMF into one certification upon expiration of the current IC.

Comment 37: Throughout the Draft Certification a number of suggested revisions were made to address issues best characterized as administrative, such as typographical errors or defined terms that should be capitalized. We believe the reasons for those suggested revisions will be self-evident and therefore a specific comment is not provided for each individually, but the comments appear as "track changes" on an edited Draft Certification. Should the reason for any such suggested revision not be self-evident to the Program, Omya would be happy to provide further comment.

Response: The administrative comments are noted, and often self-evident. In some instances changes were incorporated, in some instances they were not. All of these minor revisions or corrections are incidental.

## REVISIONS AND ADDITIONS TO THE CERTIFICATION

A number of typographical and formatting errors in the Draft Certification have been corrected, and a number of minor administrative changes have been made to the document. In a number of findings and conditions, a reference to the TMAs has been added to denote that both the unlined and lined portions of the Facility will be addressed by this Certification.

The following substantive revisions and additions have been included to create the Final Certification:

1. Finding of Fact (L): Substituted the undefined term "growth capacity" with the more descriptive term "maximum allowed disposal rate." Also, other wording modifications that do not alter the purpose of the finding.

2. Condition (1): Clearly defines the "Facility" as consisting of both the proposed, lined TMF and the unlined TMAs, specifically listing the applicable components of each.

3. Condition (3): Includes in the list of documents considered to be the Application, the documents (F. and G.) containing closure and post-closure plans for the TMAs, as this certification will regulate final capping and post-closure care of the TMAs, once the Interim Certification has expired in October 21, 2010.

4. Condition (6): Substituted the term "growth capacity" with the term "maximum allowed disposal rate."

5. *New* Condition (7): Explicitly prohibits disposal of tailings in the TMAs after October 21, 2010. Requires the Kane and Drake TMA to be capped within 90 days of cessation of tailings disposal, and vegetation to be established within four months of capping.

6. Condition (16) – formerly (15): Now states that both the TMF and TMAs must be closed in accordance with their respective closure plans.

7. Condition (17) – formerly (16): Omya has paid the annual application fee for the period ending October 21, 2010; therefore, the Condition now requires the next payment to be submitted prior to that date, rather than the date of issuance of the certification.

8. Conditions (18) and (19) – formerly (17) and (18): The dates of submittal of the closure and post closure plan review and cost estimate adjustment for the TMAs and TMF have been aligned. Rather than submitting two separate documents several months apart each year, Omya will submit one comprehensive annual report by March 31.

9. Condition (20) – formerly (19): The required annual engineer's report shall now also include an inspection and evaluation of the closed TMAs. Further, the Agency is not requiring that end users of any marketed tailings be identified; only that the end uses be identified.

10. Condition (28): Deleted. Continuous monitoring of the surface water levels and flows is not currently being performed, and is not warranted. The water level of the PIQ is recorded during sampling events, and this requirement has been added to Condition 25.

11. Condition (29): Deleted the requirement that Omya notify Vermonters for a Clean Environment, and the Vermont Law School of any requests for minor changes to the Approved Site Monitoring Plan. The Condition now requires that the request be posted on the "www.OmyaInVermont.org" web site.

12. Condition (41): Added Conditions of the Interim Certification superseded by this Certification. Specifically, the requirements found in Condition 12 (closure and post-closure cost estimate adjustments), 13 (annual inspections), and 15 (future certification applications) – as well as the previous included Conditions 10, 16, 18 – 27 - are now addressed in this Certification.