



**COMMUNITY MEETING ON OMYA'S
APPLICATION FOR INTERIM CERTIFICATION AND TAILINGS MANAGEMENT**

Meeting Notes* from:

November 1, 2005

Lothrop Elementary School Auditorium

6:30 p.m. - 8:30 p.m.

I. WELCOME (JIM REDDY, PRESIDENT AND TONY COLAK, VICE PRESIDENT OF OPERATIONS, OMYA)

- Jim Reddy, President of Omya Inc., introduced himself and spoke about past plant operations and Omya's desire to engage the public.
- Jim emphasized Omya's willingness to involve the community in proposed changes at the plant; stating that tonight's meeting was an important step to establish a dialogue with the community.
- Jim introduced Tony Colak, Omya's Vice President of Operations, stating that he (Jim) would be traveling frequently and that Tony would be available to continue this new process started at the meeting tonight.

II. INTRODUCTION AND OVERVIEW (DANO WEISBORD, CLF VENTURES)

- Dano provided an overview of the agenda and the process for the evening.
- He invited audience participation in the evening's process, as the most relevant part of the meeting would involve capturing questions, comments, and concerns raised by the audience, and to prioritize and develop agendas for future meetings.
- Dano then introduced Mike Laurent, Omya's Environmental Manager, to offer an overview of the Interim Certification Application and a review of the Verpol operations.

III. CERTIFICATION OVERVIEW AND OMYA VERPOL OPERATION REVIEW (MIKE LAURENT, OMYA)

- Mike stated that the purpose of the meeting was to: explain what Omya does at the plant, describe the Interim Certification Application process, clarify the science and technical components of the process, and obtain the community's view and opinions.
- Mike then provided an overview of Omya's mineral processing operations in Verpol, addressing the materials used throughout the process, the chemicals that are naturally

* *This document seeks to provide an overview of the Omya Community Meeting held November 1st, 2005. The minutes portray the general tone of the dialog between presenters and community participants and do not represent a verbatim recording of the meeting.*

occurring and that are added in the manufacturing process, and the end products and byproducts of the operation.

- Mike indicated that, as is common with mineral processing operations, tailings are generated. The ore from Omya's quarries contains primarily calcium carbonate, but also mica, quartz, iron pyrite, and other minerals. Because calcium carbonate is the target mineral, a flotation process is used to reduce the amount of unwanted minerals in the ore product. Omya's flotation process uses a "tall oil" based reagent [tall oil hydroxyethyl imidazoline or TOHI]. Tall oil is derived from pine trees and is a byproduct of the paper making process.
- Mike clarified that Omya is not proposing to develop the 32 acre Tailings Management Area that was the subject of the Act 250 permit amendment. Omya is restricting current operations to existing areas on site.
- Mining tailings historically have been exempt from solid waste certification. Recently, Vermont became the first state to regulate tailings and we are applying for a certification to manage the tailings on-site.
- Mike presented an overview of the application process. On August 15th, Omya submitted an application for Interim Certification for management of the tailings currently in place and proposed for placement in existing Tailings Management Areas, specifically the Kane & Drake Quarry and the Dolomite Quarry areas. Interim Certification would cover a two year period.
- Mike explained that the application review process consists of two steps; Administrative and Technical Reviews by the state Agency of Natural Resources. The "Administrative Completeness" Review determines if the application addresses the required information in accordance with the rules. Omya's Application was determined by Agency of Natural Resources to be "Administratively Complete" on October 11, 2005. The application notice was published in the Rutland Herald and the Rutland Tribune on October 19, 2005. The public comment period ends on November 29, 2005. After completion of the comment period on the notice of application, the Rules require Agency of Natural Resources to commence the Technical Review.
- If the application conforms to the rules, Agency of Natural Resources shall provide notice of issuance of the draft certification and the opportunity for public comment. Agency of Natural Resources may also agree to hold a "Public information meeting".
- One audience participant, questioning the representation of the community at the meeting, asked how many individuals in the audience were Omya employees. Five (5) audience members (Omya employees, other than those involved in the presentation) raised their hands.
- Mike then re-introduced Dano who began the technical discussion portion of the agenda.

IV. INFORMATIONAL PRESENTATIONS AND QUESTION AND ANSWER SESSION (DANO WEISBORD, CLFV)

- Dano then invited Omya's staff and consultants to describe the technical and process areas at Omya; information and feedback from the audience members was documented by CLF Ventures staff.

- The audience prioritized the topic areas from the following choices:
 - Tailings Management Area Design and Operation
 - Tailings Constituents and Measurement
 - Site Geology and Groundwater Monitoring
 - Health and Environmental Standards
 - “Section 5 Study of Calcium Carbonate” Brainstorm
- The area with the largest number of community votes was **Health and Environmental Standards**, so that topic was covered first.

A. Health and Environmental Standards - Tom Sawyer (Omya) gave an overview of: (i) the chemicals that are used at the plant and are or have been associated with the tailings product; (ii) the type of data that has been gathered; and (iii) the standards to which the data are compared.

- Tom provided the audience with a handout that summarizes the chemical compounds evaluated in connection with the tailings product. The information provided included the concentration levels and detection limits of the various chemical compounds that may be present in on-site and off-site locations.
- Tom fielded questions from the audience:
 - Q: Where are the wells (mentioned for having past testing performed) located?
 - A: Meddie Perry (geologist with Heindel & Noyes) has a map of all wells that have been tested [This information was later distributed as part of Meddie’s presentation]. The results of these tests also are documented in the Interim Certification Application.
 - Q: Do standards exist for tall oil?
 - A: Omya worked with the VT Department of Health to develop a standard for the tall oil derived flotation agent because, before this effort, there was no standard for the compound. The current groundwater Health Advisory is 126 parts per billion (ppb).
 - Q: What is the effect of pine tree sap and tall oil on groundwater? What process does this chemical go through? In a natural state, can pine tree sap have the same effect as tall oil on a water body?
 - A: We do not know of studies that address these questions.
 - Q: What are the amounts of chemicals used by Omya in comparison to other local industries? And are there higher rates of cancer in Rutland County than in surrounding communities/counties?
 - A: We do not know of studies that address these questions.
 - Q: What is the chemical makeup of tall oil and how is it made?
 - A: Tall oil is refined from pine “liquor” in the papermaking process. The tall oil derived flotation reagent used at Omya consists of the following substances (the

table[†] shows the Miramine brand of tall oil reagent that Omya formerly used, and the Custamine brand that it uses currently):

Component	CAS#	Percentage of Custamine 51D Reagent	Percentage of Miramine TO-DT Reagent
Tall Oil Hydroxyethyl Imidazoline	61791-39-7	91.0%	>90%
Amine Acetate	61791-54-6	7.5%	8%
Aminoethyl-ethanolamine	111-41-1	1.5%	<2%

- Q: What is the difference between tall oil and toluene?
- A: Tall oil is a major component of the floatation agent used by Omya to remove the mineral impurities during the manufacturing process and it is refined from pine “liquor” in the papermaking process. Toluene is not used onsite or in the mineral processing operations; the source of toluene detected in some samples is unknown.
- Q: What is the current cancer rate in the area versus past rates?
- A: We do not know of studies that address this question.
- Q: Has water testing occurred in Proctor and Pittsford versus on the site itself?
- A: Water from the Pittsford-Florence Water District well has been tested routinely for substances associated with Omya. [This well is located near Otter Creek, east of Omya. This is a separate water system from the Pittsford (downtown) water system, which obtains its water from springs in Chittenden.]
- Q: How long as the Verpol Plant been there?
- A: Operations began in 1978.
- Q: Has the water in Smith Pond been contaminated? Has this impacted the fish?
- A: There is no documentation that the water in Smith Pond has been contaminated by Omya’s operations. A state biologist studied the Otter Creek tributary back to the plant and found normal fish populations. A report was prepared by the state biologist and we will make efforts to make this report available.
- Q: How far will contamination travel?
- A: The answer to this question is based upon a numerical groundwater model that is currently under development with oversight by the state Agency of Natural Resources. Preliminary indications are that contamination travel will be limited (to a matter of feet) within the Facility before the compounds are not detectable.

[†] This table was not presented at the meeting. However, its contents were discussed. The table (also set forth in the Interim Certification Application) depicts information explained at length, and has been included here to clarify questions raised at the community meeting.

B. “Section 5 Study of Calcium Carbonate” Brainstorm - Tony Colak then initiated a dialogue with the audience to brainstorm ideas related to the Vermont legislative requirement that Omya perform a study of its calcium carbonate production process:

- Tony provided the audience with a copy of the statute and explained that he would like to obtain the community’s input and hear their suggestions regarding how Omya should conduct this study.
- He stated that, per the legislation, Omya would retain an independent, third party to validate existing data and to study the human health and environmental effects of Omya’s production process.
- Tony indicated that EPA and/or state approved methods would be used to perform the Section 5 Study.
- Tony welcomed comments on how to conduct the study:
 - Q: What would be the economic impact to conduct this type of research? And what other industries are held to this type of standard?
 - A: Jim Reddy stated that to his knowledge, only Omya is required to perform this type of study.
 - Q: How much will this study cost?
 - A: The cost of the study is dependent on the scope of the study, which has not yet been determined.
 - Jim Reddy stated that Omya is a private company that has not shared a lot of information, based on a strategy to remain competitive in the marketplace by not revealing information publicly. This has been a good strategy to deal with competitors, but has not been good for relationships in the community. Omya is willing to complete this study and is seeking stakeholder input to help pick consultants to do the Section 5 Study; consultants that are acceptable to Omya and the community at large.
 - Tony stated that Omya wants to submit a credible report that is accepted by the public. The participants responded with questions:
 - Q: Can Omya get consultants to volunteer their time to perform analyses to satisfy the requirements for the Section 5 Study? Is the University of Vermont capable of the review? Are there any universities that are capable of providing a consultant(s) on the ISO 14000 Management System?
 - A: It is doubtful that consultants will volunteer their time as they will seek to be compensated for their time. It is not known whether the University of Vermont will be capable or willing to participate in the study. Omya wants to make sure that the consultant is accredited as required by the legislation.
 - Q: Does Omya have an internal auditor monitoring operations?
 - A: Omya is responsible for its local operations, but must report the status of existing operations internally. The Verpol Plant also is certified as ISO 14000, an international environmental standard.

C. Site Geology and Groundwater Monitoring - Meddie Perry (of the firm Heindel & Noyes) provided the group with an overview of site geology and groundwater monitoring.

- Meddie provided the audience with a handout that consisted of a map of the groundwater and surface water monitoring locations (public and private) in the area.
- Sampling and testing of drinking well waters (public and private) began in 2000 and these wells have been sampled and tested frequently since.
- Based on the test results, chemicals associated with Omya's plant operations have not been found in surface water. There is, therefore, no indication that the downstream areas would be contaminated.
- No chemicals associated with Omya's operations have been detected in public or private groundwater wells located off the Omya property.
- The test results for groundwater and surface water meets state standards. Tailings have existed onsite since 1980.
- Omya has measured groundwater elevations and analyzed the structural geology of the site to determine the groundwater flow direction and flow rates. From the tailings areas, groundwater flows to the north-northwest.
- The test method (AG24) that Omya has been using since 2003 for TOHI (the tall oil derived flotation agent) has been approved by the state.
- Meddie then welcomed questions from the audience:
 - Q: Why drill a well in one area over another?
 - A: Wells are drilled in fracture zones where groundwater flows. Wells are constructed by drilling into these fracture zones. Zones can be located by various methods, including geologic sensing, VLF (very low frequency), and three-dimensional aerial photography. Most of the wells in consideration are located downgradient from the tailings management areas, or were drilled directly through tailings management areas. There are also upgradient wells to compare baseline water quality.
 - Q: How deep are these wells?
 - A: Wells extend to a depth of at least 100 feet below the ground. The deepest wells extend to about 600 feet below the surface, but most wells ranged between 200 feet and 400 feet below ground surface.
 - Q: Why use three-dimensional studies?
 - A: The study methodology often can be the preference of the scientist/researcher.
 - Q: Is there an abundance of dead animals in the area? Have roots of plants been affected?
 - A: Omya has not undertaken a study of animal mortality in the area. However, there does not appear to be evidence of an abundance of dead animals. (A member of the audience noted seeing healthy deer in the TMA area.) The impact on plant roots is unknown.
 - Q: How long has Omya been running groundwater tests?

- A: Groundwater testing began in the fall of 2000, and was mainly focused on the Omya site. In 2002, more intense studying began, including additional testing of off-site wells. New methods to analyze the water samples were put into use in 2003, including the TOHI testing method (AG24) that has been approved by the State.
- Q: Is there any variation in tall oil between the wells? Any seasonal variations or fluctuations or have you seen any significant changes over time?
- A: TOHI consistently has not been detected in groundwater. Of the 139 samples taken and tested for TOHI in groundwater, there have only been two detections: (i) in Well B, which is a monitoring well drilled right through the tailings product in the Kane and Drake quarry; and (ii) in Well 2, which is located in the middle of three tailings areas. The only time TOHI was detected in well 2 was when the well was being heavily pumped for an extended period of time, which pulled sediment containing TOHI into the well. Since TOHI's affinity is for solid particles, normally it does not get into the groundwater. No TOHI or other Omya process chemicals have been detected in private wells or the Pittsford-Florence public well, all of which are located offsite.

D. Tailings Management Area Design and Operation – Eric Steinhauser (of Sanborn, Head & Associates, Inc.) offered the group a quick overview of tailings management design and operations

- Eric handed out three maps of: (i) Existing Conditions; (ii) Interim Certification; and (iii) Final Grading Plan, which include the site topography, the locations of the former quarries and the Tailings Management Area, along with the proposed grades.
- Eric stressed that significant work and research had been performed to classify and characterize the tailings product constituents and measurements.
- Eric asked the audience if they had any remaining questions:
 - Q: Have you characterized the entire tailings pile?
 - A: Core samples have been obtained for the Kane and Drake and Dolomite quarries. Several samples were obtained to represent various heights, depths, and physical (lateral) locations. A laboratory in Massachusetts performed the geotechnical testing.

E. Tailings Constituents and Measurements – Mike Laurent (Omya) discussed various components of tailings and TOHI with the audience:

- The analytical method called AG-24 for determining the total concentration of tall oil based reagents in groundwater has been developed by a certified lab. This method was validated by the Agency of Natural Resources on August 11, 2005. The importance of this certification by the state is that it validated all historical AG-24 groundwater data collected at the site.
- A second analytical method currently is being developed and validated for determining the concentration of each individual constituent of the tall oil based flotation reagent.
- Mike answered questions from audience participants:

- Q: Are flotation chemicals used in the plant harmful to the human body?
- A: If used per manufacturer's directions, the flotation chemicals do not pose a significant risk to human health. Mike explained that tailings product is in a slurry form comprised of approximately 99.6 percent crushed rock and small amounts of chemical compounds used during the production process. Mike stated that through the Section 5 study, additional research will be conducted on tailings constituents.
- Q: What will you do with tailings that are contaminated with biocides?
- A: The biocides are a preservative, added to outgoing slurry shipments to customers, and are not used in or added to tailings.
- Q: What have you done with historic spills?
- A: We cleaned them up according to regulations.

V. RANKING ISSUES FOR NEXT MEETING AGENDA (DANO WEISBORD, CLFV)

- Dano offered an alternative to voting and prioritizing the issues, questions, and comments for future Omya community meetings. Dano suggested that Omya take the information received tonight and e-mail or mail it to the evening's participants. The participants could review the information and rank the issues, questions, comments to collectively develop an agenda for future community meetings.
- The audience agreed.

VI. OBSERVATIONS AND QUESTIONS (DANO WEISBORD, CLFV)

- Dano asked the participants if they had any outstanding questions.
- Dano noted that comment forms were available in the back of the gymnasium to provide additional comments or questions. The comment forms also asked if the individual would like to participate in a steering committee to provide ideas for future agenda-setting for Omya community meetings.
- Dano also noted that, with the e-mail or mailing, the participants could state if they were interested in participating in the steering committee.
- Dano thanked the group for their questions and participation this evening.

VII. CLOSE (JIM REDDY AND TONY COLAK, OMYA)

- Jim and Tony thanked the participants for attending the meeting.
- They emphasized that this meeting was a step in the right direction for commencing a community dialog, answering questions, and capturing concerns and comments of the area's community members.
- They highlighted the next steps for that Omya would take: (i) send out a list for the evening's participants to rank and set the agenda for future meetings; (ii) address the comments/questions raised during the meeting; and (iii) host another community meeting in the near future.
- Participants were asked to indicate whether they would prefer if the next meeting to be before or after Thanksgiving.