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Memorandum

Date: December 10, 1996

To: Mr. Ken Schultz
Gandy Marley Inc.

From: John Kendall
TerraMatrix, Inc.

Subject: Typical RCRA TSD Conditional Permitting Approach

Ken:

Per our discussion, I have outlined below a series of general steps which, based on our experience, are representative of the permitting processes for Subtitle C Hazardous Waste facilities in California and Colorado. Please feel free to call if you have any questions. We can provide additional supporting documentation if required.

Typical Conditional Permitting Approach

Step 1: Submit Designs in Part B Permit Application

- Designs are not developed to construction level
- Construction specifications are not submitted
- Final waste types and throughputs are not defined
- Final facility dimensions are not defined
- Final construction materials are not selected
- Enough detail is provided to describe and evaluate waste containment and groundwater impacts (facility siting, contaminant transport, liner evaluation-HELP)

Step 2: Conditional Permit is Approved by the Agency and Submitted for Public Comment

- Conditions address details not presented in Permit Application Design
- Conditions provide latitude to establish additional conditions based on review of final design submittals and final as-built facility configuration

Step 3: Final Design Prepared and Submitted

- Facility development strategy prepared and facility development is prioritized
- Individual facility detailed designs, engineering reports, and operating plans are developed for priority waste management units and infrastructure. Lower priority waste management units are not developed further and remain subject to original permit conditions.
- Documentation that permit conditions are met and construction may begin is provided by the agency following review of detailed facility designs.

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Step 4 Construction

- Design changes during construction are evaluated by agency for compliance with regulations and impacts on operations plans.
- As-built certification reports are submitted to Agency for review.

Step 5 Conditional Permit to Operate is Granted

- Construction certification reports reviewed by agency and permit to operate is granted.
- Conditions pertaining to operations plans and maintenance of the facility remain in effect and are monitored by the agency.

KHF Examples (California)

- ISU/FSU - staged permitting approach to design and construction of waste stabilization facilities
- Drum Pad / DSU - staged permitting approach to design and construction of drum handling facilities
- B19 Phase 2/3 - staged permitting approach to design and construction of landfill facility

Highway 36 Examples (Colorado)

- New Site Development Plan for Secure Cells 3-7
- Liner Design Changes: Geosynthetic Clay Liner (GCL) substitute for primary clay liner

Issues Related to New vs. Existing Facilities

- Facility expansions are subject to the same regulatory requirements for engineering design as new facilities
- Typically for facility expansions, more detailed engineering is required in submittals because a history of facility operations already exists

CC: Alan Krause, TerraMatrix Inc.
Larry Gandy, Gandy Marley Inc.

Ken,

Following are the dates for the Andrews facility that you requested.

- 5/14/93 original permit application submittal
- 12/2/93 response to notice of deficiency with some additional design detail
- 3/23/94 provided additional engineering detail on the landfill portion of the facility. My guess is that this was in the form of final design judging by the wording in the permit.
- 6/15/94 or 11/23/94 issuance of final permit by TNRCC. The reason for the confusion of the dates is that the material I have at my disposal it is hard to tell if the first date is for public comment or the final permit. In either case the permit was issued after WCS submitted the final design for the landfill portion of the facility. I am sending you a one page example of how they handled the design of the other portions of the facility with this.

In addition the way the permit reads I don't think WCS gave the TNRCC final design for any portions of the facility that the landfill. As I told you EPA Region VI doesn't seem to have a problem issuing a permit with a compliance schedule for the design. I feel confident that we can get them to convey that to the state.

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by appropriate drum-handling and emergency equipment. The permittee shall ensure that storage areas authorized by this permit which are used to store ignitable or reactive wastes comply with the stacking and spacing requirements for containers in the latest edition of the National Fire Protection Association's "Flammable and Combustible Liquids Code". Individual containers which contain ignitable or reactive wastes shall be stored such that they can be visually inspected weekly.

4. Incompatible wastes shall not be commingled in any storage facility unit unless the permittee complies with 40 CFR 264.17.
5. A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers or open tanks must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.
6. Hazardous waste stored in containers that are not in good condition shall be managed in accordance with the requirements of 40 CFR 264.171.
7. Containers storing hazardous waste shall be constructed of or lined with materials which will not react with, and/or otherwise be incompatible with, the hazardous waste stored.
8. Containers storing ignitable or reactive waste shall be located at least 15 meters (50 feet) from the facility's property line.

D. Tank Systems Design and Operational Requirements

The tank systems authorized in this permit shall be designed and operated in accordance with 40 CFR Part 264, Subpart J. The tank components and design/operational methods which were included in the permit application are hereby incorporated by reference and made a part of this permit. The following requirements apply to the tanks authorized by Provision II.B.

1. The permittee shall not place hazardous wastes in a tank system if they could cause the tank system to rupture, leak, corrode, or otherwise fail.
2. The permittee shall not place the new tank systems into operation until the permittee complies with 40 CFR 264.192.

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[III.D.]

3. Tank systems shall be adequately designed/maintained and shall have sufficient structural strength to ensure that it will not collapse, rupture or fail. The permittee shall provide/maintain the required minimum thickness of the shell and bottom/head in accordance with the design standards.
 4. Overfilling of the tanks shall be prevented by overfilling controls, which shall be maintained in good operating condition at all times. Overfilling control equipment shall be inspected each operating day to ensure that it is in good operating condition.
 5. The permittee shall not place ignitable or reactive wastes in a tank system unless the permittee complies with 40 CFR 264.198.
 6. The permittee shall not place incompatible wastes in a tank system unless the permittee complies with 40 CFR 264.199.
 7. Any tank authorized in Provision II.B. shall be immediately removed from service anytime there has been a leak in the tank system or secondary containment system or any time either is found unfit for use. At a minimum, the permittee shall satisfy 40 CFR 264.196.
 8. Any time the tank system undergoes extensive repairs, the system shall not be returned to service unless the permittee has obtained a certification by an independent, qualified, registered professional engineer in accordance with 40 CFR 270.11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification shall be submitted to the Executive Director within seven (7) days after returning the tank to use.
 9. The permittee shall comply with the inspection requirements and frequency described in 40 CFR 264.195 and Provision VIII.D.
 10. Prior to placing new tank systems into service, the permittee shall comply with 40 CFR 264 Subpart J.
- E. Landfill Unit Design, Construction, and Certification Requirements
- Landfill Unit Nos. II.B.1 through 3:
1. All construction activities associated with the landfill shall be in accordance with the design specifications detailed in the Part B application submittals dated March 15, 1993 and revisions dated May 14, 1993, June 6, 1993, December 2, 1993, and March 23, 1994 and as described in "Attachment C" of this permit.