

# **ATTACHMENT C**

## **RIDEM/OFFICE OF WASTE MANAGEMENT SUMMARY AND RESPONSES TO LETTER FROM DAVID B. VAN SLYKE (Preti, Flaherty, Beliveau, Pachios & Haley LLP) RECEIVED 2/10/2006 FOR THE REMEDIAL ACTION WORK PLAN AND 50% DESIGN DRAWINGS**

### **FORMER JAMESTOWN LANDFILL**

**JANUARY 2006**

Prepared July 6, 2006

As part of the public comments the Department received a comment Letter (#7) from David B. Van Slyke (Prete, Flaherty, Beliveau, Pachios & Haley LLP) and an attached letter (#8) from Jeff McCrady and Stephen H. Mitchell, P.E. (MACTEC) on 2/10/2006. Both were submitted on behalf of the North End Concerned Citizens. Due to the detailed discussion of technical and legal issues, a summary of these two letters and the Department's responses are detailed in this attachment. All other public comments are contained in Attachment A. In some cases these issues have been raised in other public comments and the responses refer back to the Department's responses in Attachment B. However, where these issues are unique to these comments, the response is listed here.

1. The site has been inadequately characterized.
  - A. The monitoring well network is inadequate and sparse.
  - B. No monitoring wells are located in the overburden
  - C. There are no well pairs to determine vertical gradient
  - D. The public works facility was not contemplated in the site investigation.

*See response #1, Attachment B.*
2. The landfill cover system does not comply with RIDEM Regulations or its Landfill Closure Policy
  - A. The soil cap does not control migration.
  - B. The cover system is not a low permeability cap

*See responses # 1 and 2 , Attachment B.*
3. The site does not have an adequate post-closure environmental monitoring program
  - A. The Site Investigation was faulty
  - B. This is a completely different closure approach

*See response #1, Attachment B 1.*
4. The proposed landfill closure design allows the Town to avoid storm water management requirements by increasing storm water discharge into landfill waste, thereby creating more landfill leachate that will threaten the island's aquifer  

*We have reviewed the 50% Design and it does not call for any storm water discharge to areas filled with waste or to any areas upgradient of filled areas so the assertion is based on inaccurate information. The issue of storm water discharge is important and the Town will need to meet all the requirements of the RIPDES and Wetlands Regulations as explained in responses #10 and 36, Attachment B.*

#### **Letter # 8: Jeff McCrady and Stephen H. Mitchell, P.E. (MACTEC, 2/10/2006)**

This correspondence was submitted as an appendix to the previous letter from PreteFlaherty and is written on behalf of the NECC. For clarity, MACTEC headings and comment numbers are included.

#### **Site Background/Site Investigation Summary (MACTEC comments 1-4)**

5. GZA believes the waste to be overlain by low permeability glacial till, but the test pit logs indicate the cover to be sand and silt.

*The Department concurs that this is confusing. We contacted GZA and they clarified the statement about reworked till as specific to the area below the proposed DPW facility. The Department will require that the statement and the observations upon which it is based be clarified in future submissions. As stated in previous comments, the Department has evaluated multiple years of site specific environmental data, and believes the remedy is protective of human health and the environment.*

6. The plan does not meet the requirements of 40 CFR 258.60 which requires that a final cover system must have a permeability less than or equal to the permeability of any bottom liner or natural subsoils present. Therefore the Town must insure the cover system meets this requirement.

*40 CFR 258.1 (c) clearly states that:*

*These criteria do not apply to municipal solid waste landfill units that do not receive waste after October 9, 1991. As the site ceased landfilling in 1984, this regulation is not applicable. For more information you may wish to consult with EPA New England.*

7. Cover soils were not tested for pesticides, PCBs, dioxins or furans and should be. Early reports suggest the navy dumped transformers at the landfill.

*As discussed in response #1, the Department has already approved the Site Investigation Report and associated remedy and is reopening the process only as it relates to the modified use of the property.*

8. MACTEC believes the statement regarding the last 4 rounds of groundwater sampling does not completely explain the following issues:

- A. GZ-7S and GZ-7D were only installed in July and well EA-2D is at times dry
- B. Other wells were not installed in accordance with industry standards and data from them should not be used to characterize the site.
- C. The document did not contain the December 2004 data that showed an MCL exceedance of copper.

*GZA could have provided significantly more detail on the well installation and sampling but the Department does not believe such detail is necessary to review the 50% design. Furthermore, the entire EMP is an appendix to this document. See response #14 regarding monitoring well construction.*

*The copper exceedance of December 2004 is not shown in the table on page 3. It should be noted this is not an MCL but an MCLG meaning it is a non-enforceable standard based on aesthetics, and is not a health based standard.*

9. Landfill gas monitoring is limited to methane. VOC sampling in the soil gas should be done for the following reasons:

- A. The nature of wastes is largely unknown
- B. VOCs have been detected in the groundwater
- C. Gas sampling should be done for VOCs, SVOCs and petroleum hydrocarbons.

*As discussed in response #1, the Department is reopening the process only as it relates to the*

*modified use of the property. Given the sampling that has taken place, the Department does not believe it is not accurate to say the nature of the waste is largely unknown. See also response #35 regarding passive soil gas sampling.*

### **Remedial Actions- Groundwater (MACTEC comments 5-6)**

**10.** The EMP should be modified to include the following:

A clear understanding of potential flow pathways for groundwater and potential contaminants transfer from all site activities in both overburden and bedrock

*See response #1, Attachment B.*

**11.** There are no wells in overburden

*See response #14, Attachment B.*

**12.** The monitoring well network must be more closely spaced to monitor any potential releases from activities at the DPW garage.

*See response #19, Attachment B.*

**13.** The groundwater underneath the site was reclassified in 2005.

A. How will the Town monitor the GB/GA areas?

B. How will the monitoring ensure there are no exceedances in GA areas?

C. Will there be monitoring to ensure GB and GA regimes do not show trends that will impact GA areas.

*The Department reclassified the groundwater in June of 2005 after public notice and no public comments were received. Such reclassification was a part of the approved EMP and does not relate to the 50% Design. The approved EMP includes point of compliance for groundwater sampling.*

### **Landfill Cover System (MACTEC comments (7-10))**

**14.** The landfill cover system does not meet the requirements of the Landfill Closure Policy or the RIDEM Solid Waste Regulations.

*See response #22, Attachment B.*

**15.** RIDEM solid waste program is delegated from the Federal Program and must be consistent with and no less stringent than the Federal Program. Closure is not consistent with 40 CFR 258. Why are these regulations not applicable to DEM's review?

*Following the promulgation of RIDEM Solid Waste Regulations in 1992 the USEPA compared those Regulations to 40 CFR 258.40 and found them to be at least as stringent. However, MACTEC misunderstands the Rhode Island Solid Waste Program. This program enforces RIDEM Solid Waste Regulations and their parent statutes. It is not a federally delegated program and does not have the authority to enforce 40 CFR 258 except for those portions incorporated by reference in RIDEM Regulations. In addition we believe 40 CFR 258 is not applicable because of 40 CFR 258 (c) that states:*

*These criteria do not apply to municipal solid waste landfill units that do not receive waste after*

*October 9, 1991.*

*The landfill ceased to accept waste in 1984. The Federal Regulations state the landfill must receive waste after October 9, 1991 and do not make any reference to Rhode Island Certificates of Closure. As the Department has not been delegated to enforce 40 CFR 258, MACTEC may wish to consult EPA New England.*

16. How does the existing soil cap satisfy state and federal regulations?

*See response #1 and #22, Attachment B*

17. A variance must be submitted with an opportunity for review, comment and approval.

*The approved SIR and the associated review, comment and approval of the remedy satisfied the requirements of the regulations, see also responses #1 and #22, Attachment B.*

18. Appendix C was not available for download from the web site. Once such information is received from the Town, such analysis will be undertaken and provided to RIDEM. MACTEC reserves the right to provide further comments on this matter.

*When the plan was received it was immediately made available to the NECC and other interested parties for review. Norma Willis from the NECC reviewed the document at RIDEM Headquarters within 2 days of its receipt by the Department. At the Department's request, copies of the entire document were made available at both the Jamestown Public Library and Town Hall. Furthermore the Department never received a request for this appendix from MACTEC and the Department cannot extend the comment period because MACTEC chose not to review the document that was made available at 3 public locations.*

#### **Site Storm water Management (MACTEC comments 11-21)**

19. A larger storm water management system may be required to handle the additional runoff created by the proposal and RIDEM's additional paving requirement outlined in the 30% Design comments. Will RIDEM's request for the access road to be paved, as per the comment on the 30% Design, be complied with (paving was not shown in the 50% Design)?

*The Department believes these are valid concerns, see response #13, also as per response #10, the Department may require changes to the retention basin design as required by RIPDES and Wetlands Regulations.*

20. With a low permeable cover system, will the storm water management be adequate.

*Such a cover is not proposed see also response #10, Appendix B.*

21. MACTEC had a number of specific questions regarding the storm water design and calculations. Among them were the following:

A. What runoff curve number is proposed?

B. Storm water is discharged to a private residential property. What are the regulatory ramifications of this?

C. How will the level spreader on North Main Road be protected from vehicle damage?

D. A level spreader will be required on Lot 47.

E. What is the nature of floor drains and storage tank at the transfer station?

F. A Storm Water Pollution Prevention Plan will be required.

G. The site must comply with MS4GP requirements

*For those aspects of the Town's plan that go beyond the remedial measures qualifying for a wetlands exemption, this will be part of the review under the Wetlands Program and the concern will be forwarded to the Office of Water Resources for consideration.*

22. WQ Basin 2 and Detention Basin No. 2 both rely on infiltration of storm water. Detention Basin 2 infiltrates just up gradient of the landfill boundary and WQ basin no. 2 infiltrates partially within the landfill boundary.

*See responses #10 and 36.*

23. WQ Basin 1 and part of basin #2 should have better sedimentation controls.

*See response #10.*

24. Storm water is discharging to Lot 47 that is a residential property. Is a zoning ordinance being proposed?

*See response #3 of Attachment B regarding Town Authorities.*

25. What will be the nature of bathrooms, floor drains, and under-drains at the new facility?

*As per response #10, this will be part of the review under the RIPDES, Wetlands and ISDS Programs and the concern will be forwarded to the Office of Water Resources for consideration.*

26. The underdrain outlet is a source of leachate.

*It is the Department's understanding that the underdrains will not discharge to the filled areas or any areas upgradient of filled areas. We expect this to be clarified in the 90% Design Submittal.*

27. Will there be a subdrain at the facility?

*All of the detail regarding subdrains is not contained in the 50% Design. When the 90% Design is submitted, the design of the subdrain will be evaluated to ensure it meets RIPDES requirements as per response #10.*

28. Storm water discharge if it is contaminated with leachate will be illegal under RIPDES regulations. Will these regulations apply?

*The Department's review and understanding is that the storm water will be collected prior to contact with waste. Therefore it will not be contaminated from the landfill. The Design will need to comply with all RIPDES requirements as per response #10.*

### **Landfill Gas Management (MACTEC comments 30-32)**

29. What landfill gas monitoring will be required?

*Landfill gas monitoring has not been altered from the EMP except those that relate to monitoring of the buildings. The Department's standards require that methane levels not exceed 25% LEL at the property boundary. Additionally, the Department believes that the building will need methane monitoring due to its location within the landfill property boundaries. Such*

building monitoring systems have been required at similar facilities in the state as a safety precaution.

30. What will be the response levels for methane? What activities will be restricted?  
*We expect such a response level to be detailed in the 90% Design. The response level will dictate the need (if any) for restriction of activity.*
31. MACTEC recommends a landfill gas mitigation system be installed.  
*Landfill gas sampling as part of the SIR did not indicate any exceedances of the requirements set forth in the regulations (25% LEL at the property boundary). As per response #1, this issue is not being revisited.*

#### **Waste Excavation and Disposal (MACTEC 33-35)**

32. The shed may be demolished and landfilled onsite in the proposed plan  
*As per response #3, all material meeting the definition of a solid waste generated by onsite activities shall be disposed of offsite at an appropriately licensed solid waste management facility.*
33. Testing of excavated and separated soils does not include metals testing.  
*See response #12.*
34. Waste excavated should only be relocated to paved areas within the footprint of the landfill.  
*See response #12.*

#### **Erosion and Sedimentation Control MACTEC 36-37)**

35. Staked hay bales should not be used for Sedimentation Control in disturbed areas of the site.  
*See response #10.*
36. All drainage channels should be lined with riprap.  
*See response #10.*

#### **Yard Waste Compost Area (MACTEC 38-40)**

37. The depiction of final cover of the composting area does not depict the extra two feet of cover and the slope requirements under RIDEM *Solid Waste Regulation #8*.  
*The Department concurs and the 90% Design must demonstrate compliance with Solid Waste Regulations #8. Please refer to response #13.*

#### **Site Utilities (MACTEC 41-45)**

38. MACTEC had several comments (41-43) regarding the specifics of the proposed ISDS system.  
*See response #10.*
39. The lot 47 well had a pump test to determine its adequacy to supply water to the proposed DPW

facility.

- A. Is 200 GPD an adequate supply for the facility
- B. Are large quantities of water needed for maintenance activities
- C. Does RIDEM has pump test results
- D. Will higher pumping rates impact the landfill?
- E. Will the water supply be subject to public water system requirements?

*See response #17 regarding pumping rates and testing. The quantities of water used (and therefore discharged) will be addressed as per Response #10. Pump test results have not been submitted to RIDEM. It is our understanding that as per a December 2005 meeting between the Department of Health and the NECC, the Department of Health stated the following:*

*A well used to supply less than 25 employees with drinking water would be considered a "private well" and would not need to meet requirements for public drinking water supplies. Although future private well regulations are likely, the Department of Health has no current requirements on the monitoring or use of private wells.*

*The Department intends to place a condition on the final approval to restrict pumping rates to that conducted as part of the study.*

- 40.** 40 PVC jacket pipe with solvent joints may be inappropriate for use in filled areas. MACTEC suggests HDPE pipe with butt fusion joints.

*The Town should minimize to the extent practicable, the extent to which potable water goes through filled areas. The plan does call for a geosynthetic clay layers or low permeability soil to line the sidewalls of the trenches. Where it does go near fill material, the selection of pipe material must be justified as compatible with the use (compaction) and leachate characteristics. To date, contaminant levels in wells MW-3, GZ-3 and GZ-4 have been at low levels. Furthermore, the trench should be backfilled with clean soil.*

#### **Miscellaneous Comments (MACTEC 46-47)**

- 41.** Drawings C-3 and C-4 do not included proposed grading. Proposed contours should be developed.

*The Department believes that this will have to be altered in accordance with our comments regarding paving of the road. We expect the 90% Design will have such contours.*

- 42.** Site access is not completely restricted to prevent illegal dumping.

*The Department believes the need for access restriction is not altered by the proposal or from past Department approvals of the Town's Transfer Station License and is not part of the review.*

#### **Comments from 30% Design**

*In April of 2005, MACTEC submitted comments to the Department on the 30% Design. The document had been made available to the NECC, as it was a public document. The comments were provided to the Town of Jamestown. As this was a preliminary document, and therefore not opened for public comment, the Department had no regulatory authority to require the*

*Town to respond to it. Some of these comments were reiterated and/or expanded upon by MACTEC as summarized below:*

43. The proposed leaching field is within 20 feet of the North Property Boundary. Does this location conform to setback and buffer agreements? (MACTEC Re-Submittal Comment 1)  
*This comment will be forwarded to the Office of Water Resources to assist them in their review.*
44. The drainage channel along the west bank of the landfill indicates storm water velocity is high enough to cause erosion. (MACTEC Re-Submittal Comment 2)  
*See response #10, Attachment B.*
45. The plan shows that almost an acre of woody plants will be left at the site. The roots of these plants will promote infiltration and compromise the integrity of the cover. It is also noted that clearing limits may not be accurate on the 50% Design. (MACTEC Re-Submittal Comment 4)  
*The Department must weigh the competing factors of root infiltration versus the greater evapotranspiration and erosion control that deciduous vegetation will provide. Were there an engineered cap in place, this balance would change. Regarding the clearing limits, we expect the plan may change somewhat in the 90% Design.*
46. There is a 60-foot strip of waste near the western boundary of the property. It is unclear from the drawings if this waste will be left in place. It is still unclear in the 50% Design. (MACTEC Re-Submittal Comments 6 &7)  
*It is also the Department's understanding that this waste will be removed. The Department is requesting that the 90% Design more clearly define the limits of waste removal.*
47. Collection of storm water in subsurface chambers and surface swales should consider the potential for exfiltration. (MACTEC Re-Submittal Comment 8)  
*See response #36, Attachment B.*
48. Due to the limited size of the barrier upgradient of the excavation area, it is likely that leachate will circumvent this barrier and the 6 inch ADS slotted wall drain will collect leachate from the area of the DPW garage and discharge it at the toe of the wall. (MACTEC Re-Submittal Comment 9)  
*See response #10, Attachment B.*
49. An outlet device for the Pond should be designed that allows peak flows to be conveyed to the culvert inlet without flooding the road. (MACTEC Re-Submittal Comment 11).  
*See response #10, Attachment B.*
50. The EMP and or SWPPP should require continued monitoring for concentration of lead and zinc in the storm water long term. (MACTEC Re-Submittal Comment 12)  
*See response #10, Attachment B.*
51. Appendix C was not available for download from the Jamestown Web Site; therefore MACTEC reserves the right to provide additional comment on this document. (MACTEC Re-Submittal Comment 13)

*See response #17 of this document.*

**52.** Lining of storm water controls should be sufficient to evaluate its ability to withstand flow velocity. (MACTEC Re-Submittal Comment 14).

*See response #10, Attachment B.*

**53.** Hydraulic conductivity testing must be done to ensure the cover soils meet the RIDEM standard of  $1 \times 10^{-7}$ . (MACTEC Re-Submittal Comment 17)

*See response #6 of this document.*

**54.** A HELP model should be completed to predict the estimated leachate generation of the landfill. (MACTEC Re-Submittal Comment 18)

*See response #6 of this document.*

**55.** The 50% Design does not include settlement calculations to show that the landfill will meet 3% slopes required by *Solid Waste Regulation #2*. (MACTEC Re-Submittal Comment 19)

*The Department concurs that the Town should provide details on how annual inspections provided under the ELUR will monitor settlement.*

**56.** The landfill as a whole does not have a passive gas venting system as recommended by MACTEC. (MACTEC Re-Submittal Comment 20)

*See response #1, Attachment B.*

**57.** What is the plan for decommissioning of existing wells EA-2S, EA-2D and EA-1B? Decommissioning is not included in the plan. (MACTEC Re-Submittal Comment 21)

*In accordance with the approved EMP these wells are to be decommissioned. It is the Department's understanding that decommissioning of these wells will be done on a separate (presumably faster) track from closure activities described in the 50% Design, the well closures must comply with all Department standards.*