WAYNE DISPOSAL, INC.

Ms. Karen Kirchner
TSCA Programs Section
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

October 31, 2012

RE: Wayne Disposal Site No. 2, Master Cell VI-F & G TSCA Approval Amendment
Response to EPA's comments (October 1, 2012)

Dear Ms. Kirchner:

This letter has been prepared in response to your certified letter dated October 1, 2012 regarding our request to amend the TSCA Approval for Wayne Disposal, Inc.'s (WDI) chemical waste landfill. The request is for amendment of the September 29, 2011 TSCA Approval to include TSCA waste disposal capacity in Cells VI-F&G. This capacity expansion area has already been licensed for construction to receive RCRA waste by the State of Michigan. In support of the request for amendment, WDI submitted a copy of the "WDI Operating License Application Master Cells VI F & G" that was submitted to the Michigan Department of Environmental Quality (MDEQ). This document will be referred to as the "Approval Application" or just the "Application" to be consistent with EPA terminology henceforth in this document. The current RCRA operating license issued by MDEQ that includes Cells VI F & G under Part 111 of Michigan Public Act 451 will be referred to as the "Operating License" throughout this document.

The EPA provided comments following their review of the April 18, 2012 TSCA amendment request and license application. We note that some of the EPA comments request an amendment to the "Approval Application", which is different than a request to amend the current TSCA Approval. As appropriate, we will refer to current TSCA Approval findings or conditions and explain how the expansion area remains consistent with the current findings and/or conditions. We anticipate that the responses provided here along with the attachments will constitute an amendment to the "Approval Application". The following text re-states the comment provided by EPA and includes a response prepared by WDI and their consultant, NTH Consultants, Ltd. (NTH) that addresses each of EPA's comments. For ease of review, the EPA comment is provided in "blue" *italic* text.

The following comments are based on a review of WDI Operating License Application Master Cells VIF &G, Wayne Disposal, Inc. - Site No.2, dated September 2011 (Approval Application) for the Wayne Disposal, Inc. (WDI) facility located in Belleville, Michigan. The review was conducted to determine whether the Approval Application meets the requirements of 40 CFR §§ 761.75, 761.79 and 761.180. These comments describe in detail what is missing or deficient in the Approval Application.

1. *Section 761.75(b)(1) of 40 CFR specifies that, where the landfill site is not located in thick, relatively impermeable formations such as large-area clay pans, a Toxic Substances Control Act (TSCA) landfill should be constructed in soil that has a high clay and silt content with the following parameters:*
   a. *In-place soil thickness 4 feet or compacted soil liner thickness, 3 feet*
   b. *>30% soil passing no. 200 sieve;*
   c. *permeability ≤10-7 centimeters per second (cm/sec);*
   d. *liquid limit >30; and*
   e. *plasticity index> 15.*

The Approval Application does not clearly demonstrate that the soil underlying the proposed landfill expansion meets all of the foregoing parameters. Revise the Approval Application to clearly show that the landfill will be constructed in soil that meets the >30% passing No. 200 sieve standard, has a liquid limit >30; and a plasticity index >15.

WDI Response: Master Cells (MC) VI-F&G are situated in a thick, relatively impermeable clay deposit (minimum of 10 feet of native clay with permeability of 1.0 $x10^{-7}$ cm/s or less) that appears to be continuous beneath the proposed cells and entire facility. This clay deposit, along with the engineered base liner, provides protection to the aquifer beneath the facility. The engineered base liner for MC VI-F &G is the same system currently in-use at the EPA-approved MC VI-E at the facility. The liner system will be constructed of a double-geomembrane/ compacted-clay composite liner system, which is an engineered barrier that is designed and constructed in accordance with the Resource Conservation and Recovery Act (RCRA) and Michigan regulations to contain waste constituents, including polychlorinated biphenyls (PCBs).

As shown in Appendix C of Volume IV-Hydrogeologic Investigation Report and on Figures 12 through 18 in Volume IV of the Application, the 10 feet of native clay (Glacial Clay) generally consists of soils classified as CL based on the Unified Soil Classification System (USCS) with a permeability of 1.0 $x10^{-7}$ cm/s or less. Additional laboratory test results are shown on the Summary of Laboratory Test Data in Appendix C of Volume IV of the Application.

As noted during the approval process for MC VI-E at the facility, hydrogeologic investigation reports completed by NTH Consultants Ltd. (NTH) dated July 24, 1980, November 5, 1980, July 8, 1981, and March 18, 1986, characterized the underlying geological conditions at the site. These reports were submitted to the EPA during the original Toxic Substance Control Act (TSCA) license application and during the approval process for MC VI-E in 1999-2001. The hydrogeologic investigation report in Volume IV of the Application, augments these previous hydrogeological investigations for the facility. As noted in the hydrogeologic investigations, the native clay at the facility is continuous, with physical properties that "satisfy TSCA clay pan requirements" per 40 CFR § 761.75 (b)(1).

Section 1.3 in Volume III – Basis of Design and Detail 2 on Sheet 22 in the Volume III Engineering Drawings of the Application details the proposed liner system configuration for Master Cells (MC) VI-F&G. At a minimum, this liner system configuration consists of a double-composite liner system with synthetic membrane liners and a combined 8 total feet of compacted clay. As detailed in Section 5.0 of Appendix J in Volume III of the Application, the 8 feet of compacted clay is required to have a USCS classification of CL or CH and an in-place permeability of 1.0 $x10^{-7}$ cm/s or less, which meets the liner system requirements of RCRA and Michigan regulations. By definition, soils classified as CL or CH must have greater than 50 percent of their particles passing the No. 200 sieve. Also, as shown on the plasticity Chart for USCS (see Exhibit A attached to this letter), soils classified as CL or CH must have a plasticity index (PI) greater than 7. A review of data collected during construction of the engineered base liner in MC VI-E shows that, generally, the average PI of the compacted clay was 12-17, liquid limits (LL) were greater than 27, and in-place permeabilities ranged from 10^{-8} to 10^{-9} cm/s.

We believe the double-geomembrane/ compacted-clay composite liner system overlying the thick, relatively impermeable native clay deposit is consistent with the intent of 40 CFR §761.75 (b)(1) and is protective of human health and the environment.

Additionally, cross-sections of the MC VI F&G profile are included as Figures 12 thru 18 in Volume IV - WDI Operating License Application Master Cells VI F &G, Hydrogeologic Investigation Report, Wayne Disposal, Inc. - Site No.2 dated September 2011 (Hydrogeologic Investigation), but they show that hazardous waste must be excavated to achieve the presented profiles in some instances. The Volume III - WDI Operating License Application Master Cells VI F &G, Basis of Design Report, Wayne Disposal, Inc. - Site No. 2, dated September 2011 (Basis of Design) does not discuss reconfiguration of existing wastes to achieve the required profiles. Revise the Approval Application to describe all the steps necessary to achieve the proposed MC VI F & G cell configurations.

WDI Response: The cross-sections for the MC VI-F&G profiles shown in Figures 12 through 18 in Volume IV of the Application indicate existing waste from cells MC I and MC IV will be excavated to achieve the design subgrade elevations for MC VI-F&G. It should be noted that this waste was landfilled at a time that pre-dates the RCRA regulations, and by definition is non-hazardous. Section 1.3 in Volume III- Basis of Design Report of the Application provides an overview of the proposed liner system and overall development for MC VI-F&G.

More specifically, where the construction of MC VI-F&G occurs over the existing non-RCRA MC I and MC IV, development will proceed similar to MC VI-E over the existing MC V, approved by the EPA. To construct the liner system to the proposed grades in the Application, the overlying clay cap/bedding will be stripped from the existing MC I and MC IV. Any non-hazardous waste from the existing MC I and MC IV will be excavated, as necessary, to achieve the design subgrade. Where the clay cap/bedding for MC I and MC IV extends below the design subgrade elevation for MC VI-F &G, the clay will be over-excavated to allow for the grading of the excavated waste beneath the subgrade of MC VI-F &G, within the original footprint of MC I and MC IV. The design elevations for MC VI-F &G are anticipated to allow for the grading and placement of the excavated waste beneath the design subgrade elevation, with a minimum 2 feet of structural fill or existing final cover/clay bedding between the re-graded top of waste for MC I and MC IV and the bottom of the 3-foot secondary compacted clay liner. Additionally, a geogrid reinforcement layer will be placed on top of the structural fill or existing final cover/clay bedding, prior to the 3-foot secondary compacted clay liner. If all of the excavated waste cannot be replaced beneath the MC VI-F & G subgrade, the waste will be taken to the active portion of the landfill for proper disposal.

2. *Section 761.75(b)(3) of40 CFR specifies that the bottom of a TSCA landfill liner system must be at least 50 feet from the historical high water table. The Approval Application does not demonstrate that the proposed Master Cells VI F and G meet this condition. Revise the Approval Application to show that the proposed cells meet the 50-foot rule. Alternatively, revise the Approval Application to request a waiver of that condition. If you request a waiver, provide evidence that operation of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs, even though the bottom of the landfill is less than 50 feet from the historical high water table.*

WDI Response: The current WDI TSCA Approval contains a waiver to the 50-foot rule based on the finding 5(b) regarding the underlying low permeability clay and findings 6 and 14 related to the double composite liner construction. Section 5.2 of the Volume IV of the Application demonstrates that the geology of area beneath Cells VI F & G is also underlain by the low permeability clay and that at least 10 feet of this material is present or will remain present beneath the proposed landfill cells. Furthermore, Volume III of the Application shows that WDI will use the same liner system in Cells VI F & G as in the currently approved TSCA Landfill cells.

3. *Revise the Approval Application to include information on how the proposed addition will meet the synthetic membrane liner requirements set out in 40 CFR. § 761.75(b)(2).*

WDI Response: We note that the synthetic membrane liner proposed for MC VI-F&G is an 80-mil High Density Polyethylene (HDPE) double-textured geomembrane, the same material currently in-use in the EPA-approved MC VI-E. Specific provisions outlined in the construction quality assurance (CQA) plan, included as Appendix J in Volume III of the Application, are designed to maintain integrity of the HDPE liner system during construction. The detailed calculations included in Appendix B in Volume III demonstrate the geomembrane should not experience excessive strains due to differential settlement of the underlying subgrade.

Furthermore, as noted in Section 3.6 of the Basis of Design Report for MC VI-E at the facility (*Engineering Report on Basis of Design – Master Cell VI Design Modification*, prepared by NTH Consultants Ltd., dated April 2001), an extensive testing program was conducted on HDPE materials using site leachate and standardized EPA leachate exposure tests to determine the effect of any polymer degradation on the proposed synthetic materials (*Material Conformance and Compatibility for Wayne Disposal Site #2 Landfill*, prepared by RMT, dated 1989). The conclusion of the report was that none of the tested materials were degraded by extended exposure to the site leachate. Therefore, the 80-mil HDPE geomembrane meets the requirements prescribed in 40 CFR §761.75 (b)(2).

4. *The Approval Application does not include sufficient design information to demonstrate compliance with 40 CFR § 761.75(b)(7)(i)thru(iii). Specifically, the Basis of Design (Volume III) does not include a final design for the leachate collection monitoring system and no deadline for submission of the final design has been provided. We understand that, until additional leachate monitoring is completed, WDI cannot provide a design that addresses both leachate for proposed Master Cell VIF (Phase 1 and Phase 2) and for existing Master Cell 4. But, at a minimum, WDI should revise the leachate collection system discussion to include milestones which would trigger completion of the leachate collection system design and submission to EPA for approval.*

WDI Response: We note that Volume III of the Application includes the final design for the leachate collection system for MC VI-F&G. The design for the leachate collection system is described in detail in Section 3.0 of Volume III of the Application and supported by the calculations included in Appendix E and Appendix F in Volume III of the Application. Details of the leachate collection and monitoring system are shown on Sheets 12-15 and Sheets 22-23 in the Volume III Engineering Drawings. Sampling and monitoring of the leachate collection system is detailed in Section 28 of Volume II of the Application. As shown, the proposed leachate collection system consists of "simple leachate collection" as defined in 40 CFR § 761.75 (b)(7).

The existing non-RCRA MC IV is not required to have a leachate collection/extraction and monitoring system. As described in Section 1.3 of Volume III of the Application, the existing MC IV vertical leachate extraction well system will need to be abandoned to construct MC VI-F Phase I and Phase 2. The conceptual design for a new leachate extraction/dewatering system in MC IV is included in Appendix L of Volume III of the Application. The main purpose for designing an alternative leachate extraction system for MC IV is to provide temporary dewatering of the existing waste to facilitate the construction of the overlying double-composite liner system for MC VI-F Phase I and Phase 2. As noted in Volume III of the Application, the leachate level and pumping data is currently being collected and evaluated to determine the most effective approach to facilitate the temporary construction dewatering prior to liner construction for MC VI-F.

5. *The Approval Application does not describe the security fence in sufficient detail for EPA to determine whether it meets the requirements of 40 CFR. § 761.75(b)(9). Revise the Approval Application to include additional detail regarding the facility security fence.*

   WDI Response: The entire site is surrounded by a 6-foot wire woven fence with two strands of barbed wire on top. In addition, there is 24hr/7day security personnel on site at the access gate.

6. *The Approval Application does not include sufficient information on how chemically incompatible waste, including organic solvents, will be separated from PCB waste, as required by 40 CFR § 761.75(b)(8)(i). Revise the Approval Application to include additional detail regarding how chemically incompatible waste, including organic solvents, will be separated from PCB waste.*

   WDI Response: Per the current TSCA Approval (Condition 29) and the current Operating License, WDI has procedures in place for the placement of PCBs and the segregation of incompatible wastes. WDI is not allowed to accept liquid wastes including solvents, ignitable wastes, reactive wastes or wastes incompatible with the liner materials. All organic containing wastes must meet RCRA Land Disposal Restrictions prior to disposal in the landfill. Furthermore, wastes from the on-site waste treatment and stabilization plant are segregated from other wastes in the landfill (including TSCA wastes) to prevent any residual heat of reaction from contacting other wastes. These procedures are described in an internal Standard Operating Procedure LOM-OP-005-BEL and will apply to waste disposal in Cells VI F & G..

7. *Section 761.75(b)(6)(i)(B) of 40 CFR specifies that any surface water course designated by the Regional Administrator shall be sampled at least monthly when the landfill is being used for disposal operations. Subpart 32 of Volume II or the Hydrogeologic Investigation Report in Volume IV of the Approval Application does not specify monthly sampling. Revise the Approval Application to specify that surface water will be sampled at location SS- 3 at least monthly when the landfill is being used for disposal operations.*

   WDI Response: Location SS-3 has been sampled monthly and analyzed for PCBs, chlorinated organics, pH and specific conductance up to and including the present time in accordance with the original PCB Approval for the landfill. This condition was erroneously dropped in the most recent TSCA Approval of September 29, 2011. This can be remedied in the amended Approval by reinstating Condition 48 from the previous TSCA Approval.

8. *The Post Closure Plan included as Section 35 of Volume II does not provide enough detail on surface water sampling, including sampling frequency during post closure. Section 761.75(b)(6)(i)(C) of 40 CFR. requires that the established surface water course be sampled on a frequency of no less than once every six months after final closure of the disposal area Revise the Approval Application to specify the post closure surface water sampling frequency to be no less than once every six months.*

   WDI Response: The Post Closure Plan included as Section 35 of Volume II of the application has been updated to include semi-annual monitoring of SS-3 during post-closure and included as an attachment (see Exhibit B) to this letter. As per WDI's Operating License, the closure and post-closure plans, cost estimates and financial assurance must be updated each time a new disposal area is certified by MDEQ for waste acceptance. The modified post-closure plan contained herein, as well as the updated cost estimate and financial assurance will be submitted to MDEQ for inclusion in the Operating License when the certification of the first phase of Cell VI F & G is submitted to

MDEQ.

9. *The Approval Application does not include a figure or cross-sections that clearly show how the current monitoring well network of OB-21, OB-23R, OB-24, OB 34R and OB-40R comprises at least three wells equally spaced along a line through the center of the disposal area and how the monitoring wells extend from highest to lowest water table elevation as required by 40 CFR § 761.75(b)(6)(ii)(A). Revise the Approval Application to demonstrate how the current, as well as any future, PCB-specific monitoring well network comprises at least three wells equally spaced along a line through center of the disposal area and how the monitoring well network is capable of monitoring from the from highest to lowest water table elevation.*

   WDI Response: In addition to the current wells listed above, WDI will designate new wells per the revised Groundwater Sampling and Analysis Plan in WDI's current Operating License. The program is phased to correspond to the construction sequence. Attachment H of Section 27 of the application has been updated to include the additional wells that will be monitored for PCBs. This revised Attachment and a map showing the proposed well locations are included with this response as Exhibit C. The placement of the wells including the depths, screened intervals, location of well pairs and spacing between wells has been developed, as described in the application, to be consistent with the current monitoring system and the hydrogeological conditions identified in the study included as Volume IV of the Application.

10. *The Approval Application does not include sufficient information to confirm that monitoring wells installed to monitor for PCBs have removable caps as required by 40 CFR § 761.75(b)(6)(ii)(B). Revise the Approval Application to include additional detail regarding the monitoring well caps to verify that they are removable as required.*

    WDI Response: All of the wells at WDI are secured with a lockable protective cover that prevents entrance of rainfall or run-off. In addition, as described in the groundwater sampling and analysis plan, each well is equipped with a dedicated bladder pump assembly that also has a cover affixed to the top of the riser pipe. The protective casing, the area surrounding the well and the dedicated sampling equipment are all inspected each quarterly sampling event using the procedures and form contained in the Groundwater Sampling and Analysis Plan included as Section 27 of Volume II of the Application. All future wells will be covered and protected as described above.

11. *The Groundwater Sampling and Analysis Plan included as Section 27 in Volume II states in Section VI, Well Purging that "purged water should be discharged on the ground away from the well." This statement is not consistent with 40 CFR § 761.75(b)(6)(ii)(B) which requires that purged groundwater either be recycled to landfill or treated to applicable State or Federal discharge standards. Revise the Approval Application to specify that purged groundwater from TSCA monitoring wells be either recycled to landfill or treated to applicable State or Federal discharge standards as required by 40 CFR § 761.75(b)(6)(ii)(B).*

    WDI Response: The groundwater purged from monitoring wells has been tested quarterly for over 30 years and has never exceeded Federal or State discharge standards. In the event that analytical results show otherwise, WDI will collect purge water and deliver it into the leachate collection system or to a container that will be taken to the wastewater pre-treatment plant on site.

12. *The Groundwater Sampling and Analysis Plan included as Section 27 in Volume II of the Approval Application does not specify a sampling frequency for monitoring wells. Revise the Approval Application to include a minimum sampling frequency for monitoring wells sampled to assess point*

of compliance for the chemical waste portions of the landfill.

WDI Response: Review of the Application and WDI's Michigan Part 111 (RCRA) Operating License revealed that both are indeed devoid of any explicit specification of sampling frequency, except for a reference to quarterly groundwater reports. The easiest remedy for this oversight is to modify Attachment H of Section 27 in the Application (also Attachment H of Attachment 9 in the Operating License) to reflect quarterly sampling. An amended Attachment H is included with this response (Exhibit C) and will also be sent to MDEQ as a replacement page in the Operating License.

13. *The Approval Application contains insufficient information regarding the management of PCB contaminated water. Section 761.79(b)(1)(iii) of 40 CFR specifies that if the water contains less than 0.5 parts per billion (ppb) PCBs, it can be discharged without restrictions. Section 761.79(b)(1) (ii) of 40 CFR allows water to be discharged to navigable waters if it meets the specified PCB discharge limit included in a permit issued under Section 307(b) or 402 of the Clean Water Act, or discharged to a treatment works if the water contains less than 3 ppb. Revise the Approval Application to specify how PCB contaminated water is being managed in accordance with 40 CFR § 761.79(b)(1).*

WDI Response: WDI has two discharge permits; 1) a wastewater discharge permit for the pre-treatment plant, and 2) an NPDES storm water discharge permit for surface water. Both have a discharge standard of non-detect for PCBs, with the detection limit required to be <0.0001 mg/l or less. The wastewater discharge permit covers water generated as landfill leachate and storm water that falls on paved areas. All of this water is pretreated to meet discharge limits in the pretreatment plant that includes a membrane-bioreactor, metals precipitation, ultrafiltration and activated carbon for the various waste streams. The storm water that falls on unpaved areas (mostly closed landfill cells) is routed via ditches and culverts to one of two on-site sedimentation basins. All of this water is treated by sedimentation and then bag filtration followed by activated carbon prior to discharge to SS-3 per the NPDES Permit. Under the NPDES permit, the water is tested weekly for PCBs (assuming there is discharge) as influent to the carbon process, at the mid-point between the two in-series carbon vessels and as effluent to SS-3. In summary, all water discharged from the facility is treated to be non-detect for PCBs.

14. *The Approval Application includes both leachate collection and lysimeter leachate monitoring as allowed by 40 CFR § 761.75(b)(7), but contains insufficient information concerning sampling frequency. Revise the Approval Application to clearly specify that leachate sampling will occur monthly as required by 40 CFR § 761.75(b)(7).*

WDI Response: Condition 59 of the current TSCA Approval has this condition. WDI requests that this condition be retained in the amended Approval.

15. *The Ambient Air Monitoring Plan included as Section 26 in Volume II of the Approval Application does not specify the EPA established sampling days for performance of air sampling. The Introduction of the Ambient Air Monitoring Plan indicates that "sampling will be conducted on the prescribed sample days as determined by the EPA." Revise the Approval Application to specify either the decision criteria to be employed or what the EPA prescribed days are for air sampling.*

WDI Response: WDI samples according to the EPA established sample day calendar published each year. Currently WDI samples on a 1/12 day schedule. Any additional make-up samples are done on the 1/6 day schedule.

16. *The Approval Application does not include an operation-specific document which clearly outlines how day-to-day activities are to be performed and the various plans implemented. Section 761.75(b)(8) (ii) of 40 CFR specifies that an Operations Plan is to be submitted. Revise the Approval Application to include an Operations Plan. Include the following information in the Operations Plan:*
    a. *Surface water handling or discharge criteria*
    b. *Excavation and backfilling information for PCB waste*
    c. *Waste segregation information*
    d. *Documentation of burial coordinates*
    e. *Criteria for groundwater containing PCBs*
    f. *Criteria for surface water containing PCBs*

WDI Response: All operations at the site are performed under the EQ Management System that is comprised of a series of procedures, measurements and documentation. Each activity performed on site is evaluated for hazards and regulatory compliance and Standard Operating Procedures, Work Instructions and forms are utilized for each activity. Internal and third party audits are conducted on the EQ Management System. With respect to the items listed above, the documents associated with each listed activity are as follows:

a. Surface water handling or discharge criteria is managed by Storm Water Management SOP LOM-OP-011-BEL, and by our NPDES Permit and our Storm Water Pollution Prevention Plan.
b. Excavation and backfilling information for PCB waste is not applicable to our operations.
c. Waste segregation information for TSCA wastes are described in an internal Standard Operating Procedure LOM-OP-005-BEL and will apply to waste disposal in Cells VI F & G..
d. Documentation of burial coordinates are performed per SOP LOM-OP-005-BEL and the work instruction for Master Cell VI Waste Placement and Daily Plot.
e. Criteria for groundwater containing PCBs is discussed in the Groundwater Sampling and Analysis Plan (Section 27 of the Application) where PCBs, as primary monitoring parameters for TSCA wells, must be below the detection limit specified in the plan (0.0001 mg/l). Any measured concentration of PCBs greater than 0.0001mg/l is considered a potential release from the landfill and must be addressed per Condition A of Part V of the Operating License.
f. Criterion for surface water containing PCBs is likewise described in Condition D of Part V of the Operating License for on-site surface water samples and in WDI's NPDES Permit for location SS-3. The criterion is non-detect for location SS-3.

17. *The Approval Application does not include specifications for preparation and management of records for PCB disposal operations. Under 40 CFR § 761.75(b)(8)(iv), records must be maintained for all PCB disposal operations including:*
    a. *PCB concentrations in liquid waste;*
    b. *the three dimensional burial coordinates for PCB wastes; and*
    c. *the development and maintenance of additional records as required in 40 CFR § 761.180.*

Revise the Approval Application to include details on the records to be maintained for all PCB disposal operations:

WDI Response: WDI cannot and does not accept liquid waste including liquid waste containing PCBs. All PCB waste and PCB articles accepted at the site are logged into a computer system that

contains information about the waste and a scanned copy of the manifest. Burial coordinates for all PCB wastes are surveyed daily and plotted on a map showing three dimensional burial coordinates. This process is required in the current TSCA Approval (Condition 33) as well as the Operating License (Condition D.2 of Part IV).

18. *The Approval Application does not include specifications for maintaining annual records regarding the disposition of all PCBs and PCB items at the facility or the preparation and maintenance of written annual document logs, to be stored for at least 20 years after the chemical waste landfill is no longer used for the disposal of PCBs. Under 40 CFR § 761.180(d),records must be maintained for all PCB disposal operations including:*
    a. *Any water analysis obtained in compliance with § 761.75(b)(6)(iii); and,*
    b. *any operations records including burial coordinates of wastes obtained in compliance with § 761.75(b)(8)(ii).*

    Revise the Approval Application to include details on the records to be maintained for all PCB disposal operations.

    WDI Response: The current TSCA Approval for WDI has these requirements in Conditions 81 and 82. WDI will continue to comply with these requirements for TSCA waste disposed in Cells VI F & G.

19. *The Approval Application does not include specifications for preparation and management of PCB disposal operations records. Under 40 CFR § 761.180(b), the disposer must maintain annual records on the disposition of all PCBs and PCB items at the facility. The disposer must prepare and maintain a written annual document log that includes the information required by paragraphs (b)(2) of this section for PCBs and PCB Items that were handled as PCB waste at the facility. The written annual document log must be prepared by July I for the previous calendar year (January through December). The written annual.document log must be maintained at each chemical waste landfill for at least 20 years after the chemical waste landfill is no longer used for the disposal of PCBs and PCB Items. Revise the Approval Application to include details on the records to be maintained for all PCB disposal operations.*

    WDI Response: The current TSCA Approval for WDI has these requirements in Conditions 78, 79 and 80. WDI will continue to comply with these requirements for TSCA waste disposed in Cells VI F & G

20. *The Approval Application does not include specifications for preventing the use of PCB soils as daily cover materials. Revise the Approval Application to specify that PCB wastes will not be used as daily cover.*

    WDI Response: Condition C.11 of Part IV of the Operating License specifies that WDI may only use ConCover180, at least 15 centimeters of clean soil or an equivalent other material approved by the Division Chief. In no case would WDI seek approval for or use PCB soils or wastes as daily cover.

21. *The Approval Application does not include a specification that the landfill surface material must be dry enough to support the cap profile [i.e., support 10 pounds per square inch (psi)]. Revise the Approval Application to specify that the landfill surface material must be dry enough to support the cap profile (i.e., support 10 psi).*

WDI Response: Section 8.0 in Appendix K of Volume III of the Application, specifies the CQA requirements during final cover construction of MC VI-F&G. Included in this specification is a requirement to "smooth drum roll the leveling layer... to identify any areas of excessive deflection..." As shown in the attached equipment specification sheet (Exhibit D), typical equipment used to smooth drum roll the leveling layer, prior to the composite cap final cover construction, is in excess of 10 pounds per square inch (psi). Any areas exhibiting excessive deflection, due to moisture or other factors, are subject to corrective action under the CQA plan.

Furthermore, as discussed in Section 4.1 in Volume III of the Application and shown in Detail 1 on Sheet 24 of the Volume III Engineering Drawings, the total composite final cover profile above the leveling layer consists of synthetic liner components and 3.0 feet of protective soil/vegetative growth soil. Assuming a total unit weight of 150 pounds per cubic foot for these soil layers (and negligible weight for the synthetic components of the final cover system), the total pressure exerted by the final cover system profile, on the leveling layer, is only 3.1 psi.

Based on past experience in the final cover construction, the practice of proof-rolling the subgrade for the proposed final cover system will identify any deflection of the subgrade and provide improvement to support the final cover system.

22. *The Closure Plan included as Section 34 in Volume II of the Approval Application specifies a 30-year post closure period. This is insufficient. For a chemical landfill, post closure care is required in perpetuity. Revise the Approval Application to specify that post closure care will be perpetual:*

WDI Response: The closure plan included in Section 34 of Volume II specifies the required RCRA post closure period. Condition 105 of the current TSCA Approval acknowledges this fact and makes it clear that EPA can extend post-closure activities in the RCRA plan and that the maintenance of the final cap must be continued in perpetuity.

23. *The Approval Application does not identify any aspects of the Master Cell VI F & G expansion that require a waiver from EPA. For transparency and accuracy, revise-the Approval Application to identify any aspects of the Master Cell VI F & G expansion that require a waiver.*

WDI Response: WDI requests that the waiver of the 50 foot groundwater isolation requirement that is in the current TSCA Approval be applied to Cells VI F & G in the amended approval.

24. *The Approval Application does not include sufficient information concerning worker health and safety. No Health and Safety Plan was submitted as part of the Application. Revise the Approval Application to include a Health and Safety Plan.*

WDI Response: The WDI facility has a robust health and safety program consisting of many components including both introductory and ongoing training on a wide variety of health and safety, emergency and operational modules. Introductory training includes training that all employees receive, such as training on the Contingency Plan, SPCC Plan, HazComm/MSDS, site orientation, and emergency procedures. New personnel are trained on all health and safety issues, standard operating procedures and work instructions relevant to their position and location at the facility.

Per the regulations, WDI provides training that includes the following:

- Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment
- Key parameters for automatic waste feed cutoff systems
- Communications or alarm systems
- Response to fires or explosions
- Response to groundwater contamination incidents
- Shutdown of operations

Continued training is conducted on a schedule administered by the site Health and Safety Manager. A training matrix is developed each year that identifies training requirements by position and by the individual in each position. In addition to annual HAZWOPER refresher training requirements, each employee is assigned additional training directly applicable to their job description. The level of training (awareness or operational) depends on the individuals job description. Examples of job specific training include (but are not limited to):

- Confined space entry
- Lock-out/tag-out
- Excavation and trench safety
- Electrical safety
- Fall protection
- Machine guarding
- Respiratory fit testing

WDI also has a medical surveillance and Industrial Hygiene program requiring an annual physical including blood work analyses for heavy metals and PCBs.

BASIS OF DESIGN COMMENTS

1. *The Basis of Design does not discuss the potential for sinkhole development, even though site bedrock includes limestone formations. For transparency and clarity, revise the Basis of Design to include a discussion regarding the likelihood of sinkhole development at WDI and Master Cell VI F & G.*

WDI Response: The site is situated overlying Devonian aged bedrock and is separated from the surface by glacial deposits ranging from 100 to over 200 feet. Bedrock at the site is the Traverse formation and consists of a regional shale deposit overlying limestone bedrock. Review of the Hydrogeologic Atlas of Michigan (Western Michigan University, 1981) shows that the site is not situated in an area of known karst deposits.

Reviewing Figures 12 through 18 in Volume IV of the Application and the design subgrade elevations from MC VI-F&G, the lowest elevation of the proposed development is approximately elevation 655.0. Bedrock in the area of MC VI-F &G is at approximately elevation 580.0. As traditional soil arching theory demonstrates, a localized subsidence in the bedrock would be bridged by the approximately 75 feet of soil above this zone. Historically, the site has not experienced concerns with sinkhole development and the probability of a significant sinkhole developing in the bedrock foundation that would affect the performance of the liner system for MC VI-F & G is low.

2. *The Basis of Design presents an overall static stability analysis for the proposed Master Cell VI F & G expansion. The results of the analysis indicate that to maintain an adequate factor of safety (i.e., 1.45 or 1.5), the interim waste slope during filling should not exceed an inclination of 3.5 horizontal to 1 vertical. This requirement should therefore be adopted as an approval condition in order to ensure long-term stability. For transparency and clarity, revise the Basis of Design to include a discussion regarding the need for this additional overall control associated with waste placement at WDI in Master Cells VI F & G. Specify that the interim waste slope during filling should not exceed an inclination of 3.5 horizontal to 1 vertical.*

   WDI Response: Section 2.4 in Volume III of the Application discusses the slope stability analysis conducted for the proposed MC VI-F&G. Specifically, page 15 of the Basis of Design Report indicates "to maintain adequate factor of safety, the interim waste slope during filling should not exceed an inclination of 3.5 horizontal to 1 vertical", consistent with EPA's comment.

3. *The Basis of Design does not discuss seismic analysis. The Approval Application (Volume II, Section 40, Tank System Assessment Report), indicates that this topic was to be addressed in Volume IV. The Tank System Assessment Report states that, "seismic influences are not a design concern due to the nature of groundwater at the site and location of seismic faults at the project location." Due to the complex waste configuration proposed for the Master Cell VI F & G expansion and to allow for transparency and clarity, revise the Basis of Design to include a discussion regarding any potential seismic impacts and the need for assessment of stability under seismic conditions.*

   WDI Response: Section 3.1 in Volume V – Environmental Assessment Report of the Application includes a discussion on active seismic areas in proximity to the proposed MC VI-F &G. Specifically, "no faults that were active in the Holocene Epoch have been located or mapped in Michigan".

   Additional information obtained from the United States Geological Survey (USGS) provides that the closest seismic zones to the facility are the Wabash Valley Fault Zone in southern Indiana and the New Madrid Fault Zone covering portions of Arkansas, Missouri, and Tennessee, more than 400 miles away from the facility. Furthermore, as shown in the attached USGS 2009 PSHA model (Exhibit E), the probability of a magnitude 5.0 earthquake within 50 years and 50 km of the facility is 0.00 (zero). Therefore, the risk associated with seismic activity on the stability of MC VI-F&G is very low and the need for a seismic stability analysis is not warranted.

We hope that the information contained in this letter serves your needs. Please contact me if you have any questions regarding the information presented in our response or would like to schedule a site visit.

Sincerely,

Wayne Disposal, Inc.

Michael J. Takacs

Cc: Kerry Durnen, WDI
Michael Porath, WDI
David Lutz, NTH Consultants, Ltd.

Exhibit A. Plasticity Chart for USCS

Plasticity Chart for USCS

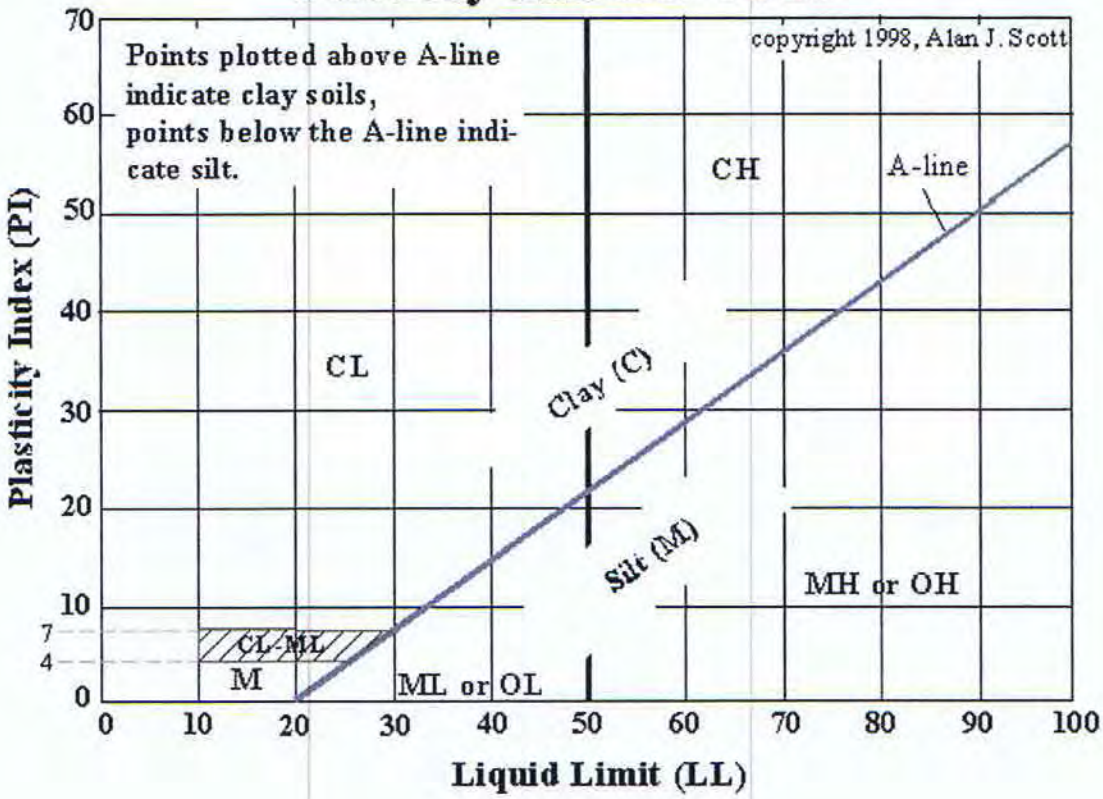

Exhibit B. Revised Post-Closure Plan

POST-CLOSURE PLAN

40 CFR 264.117(a)(1), 40 CFR 270.14(b)(13)

PART 111, R504(1)c

POST-CLOSURE PLAN

40 CFR 264.117(a)(1), 40 CFR 270.14(b)(13)
PART 111, R504(1)c

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POST-CLOSURE PLAN

40 CFR 264.117, 40 CFR 270.14(b)(13), PART 111, R504(1)c

1.0 GENERAL INFORMATION

This Post-closure Plan is prepared pursuant to requirements under 40 CFR Part 264.117 and 40 CFR 270.14(b)(13). This plan addresses those activities necessary for the proper management of the facility during the 30-year post-closure period (40 CFR Part 264.117(a)(1)]. Should the post closure plan need to be revised, an amendment to the plan shall be requested according to the provisions of 40 CFR 264.118(d).

The primary areas of responsibility include monitoring, inspection, and maintenance activities and their frequencies. During post-closure, damaged or malfunctioning equipment or structures will be repaired or replaced as necessary to maintain the facility in proper condition.

Included in this Permit Application is the post-closure cost estimate, which details the expenses associated with the management and execution of the post-closure plan. In accordance with 40 CFR part 264.118(b)(3), the person to contact regarding Wayne Disposal Site #2 Landfill during the post-closure care period is:

David Lusk
Wayne Disposal, Inc.
Phone:(734) 329-8000
36255 Michigan Avenue
Wayne, MI 48184

In accordance with 40 CFR Part 264.120, no later than 60 days after the completion of the 30-year post-closure care period, Wayne Disposal Site #2 Landfill will submit to the MDEQ, by registered mail, a certification that the post-closure care activities were performed in accordance with this plan.

In accordance with 40 CFR Part 264.119(a), no later than 60 days after the certification of closure of each hazardous waste cell, WDI will submit to the MDEQ and Van Buren Township a record of the type, location, and quantity of hazardous waste disposed of within each cell.

2.0 INSPECTION ACTIVITIES AND FREQUENCIES

The post-closure inspections will be conducted using a grid system across the entire surface (final cover) of the landfill in order to discretize the area into specific regions. The approach will be conducted such that each master cell will be inspected and recorded on the Post Closure Inspection Checklist individually. The quarterly (1st & 3rd quarter) and the semi-annual (2nd quarter) inspections will be conducted on a quadrant grid system for each master cell. The annual inspection will be conducted on a 200 foot grid system (see attached Post-closure Inspection Grid Plan). Please refer to the attached Post-closure Inspection Report following this document for further information and inspection frequencies. When an identified problem is documented on the Post-Closure Inspection Report it shall be listed on the Maintenance Log Form. The purpose of this Maintenance Log Form is to track the items through completion of the repairs and to allow for a historical evaluation of any recurring items and locations.

The clay dikes and the perimeter dewatering tile system will be inspected for any surface evidence of deterioration or damage during each of the quarterly (1st and 3rd quarters), the semi-annual (2nd quarter), and the annual inspections. The two discharge points for the dewatering system will also be observed during each of these inspections to confirm that free-flowing conditions exist at the outlets. During each annual inspection, the manholes along the dewatering tile will be opened and the interiors inspected from the ground surface for evidence of deterioration, damage or tile blockage.

3.0 MAINTENANCE ACTIVITIES

In accordance with 40 CFR Part 264.118(b)(2) and 40 CFR Part 265.310(b), the following maintenance activities have been identified.

Security System

Signs will be replaced as they become illegible or if lost due to vandalism. In the event of fence or gate damage, those sections affecting site security will be repaired or replaced immediately.

Final Cover System

Periodic inspections are performed (refer to Subsection 2 of this Plan) to determine if and when additional maintenance is needed. Inspections of the final cover are specifically directed toward the identification of the following:

- Invasion of undesirable plant species
- Deterioration of vegetative cover
- Areas of surface erosion

- Soft or unstable areas of the cover
- Damage to the dikes
- Obstructions, erosion, or deterioration of the surface water drainage ditches
- Obstructions or damage to the discharge pipes for the drainage layer
- Burrowing by animals
- Surface disturbance due to unwarranted vehicle traffic

Detection of problems such as those presented above requires remedial efforts. The remedial efforts, including fertilizing and reseeding, are undertaken to bring the cover back to the original designed condition, as necessary. Documentation of these inspections is provided as shown in the Post-Closure Inspection Form following this document.

Erosion washouts will be repaired as soon as possible after detection. When cap integrity is in question, repair activities will begin immediately. Restoration of the vegetative cover will be performed during or at the end of the growing season.

In the event of localized subsidence that results in the ponding of surface water, repairs will involve building up the subsided area with soil to provide adequate surface water run-off. Based upon recommendations by the MDEQ; areas of localized subsidence must be evaluated prior to automatic application of surface soils to restore surface drainage. For relatively small areas of localized subsidence (i.e. no greater than 50 feet laterally and/or no greater than 12 inches vertically) soils may be added without notification to the MDEQ. However, larger areas must be

evaluated and/or investigated, and shall require submittal of a Work Plan for WHMD approval prior to initiation of maintenance activities.

The vegetative cover is mowed to promote vegetative growth and surface water drainage, and to help improve the site's aesthetics. Vegetative cover that is lost or destroyed due to weathering is replaced in order to control erosion.

The maintenance of the vegetative cover also includes the elimination of undesirable trees or brush growth over the capped areas when apparent. Burrowing animals will be removed or exterminated immediately after being identified. In accordance with 40 CFR Part 264.310(a)(2), the Wayne Disposal Site #2 Landfill final cover functions with a minimum of maintenance.

Clay Dikes & Perimeter Dewatering Tile System

Periodic inspections of the clay dikes and the alignment of the perimeter dewatering tile systems are specifically directed toward the identification of the following:

- Deterioration of vegetative cover over the dikes
- Invasion of the dikes by deep-rooted, woody vegetation species
- Areas of dike surface erosion
- Soft or unstable conditions on dikes or along the tile system alignment
- Disturbance or damage to dikes or tile system manholes
- Blockage of the dewatering tile system outlets
- Excess fluid levels or non-flowing conditions in the dewatering tile system manholes

Vegetative deterioration or surface erosion on the clay dikes will be restored as soon as possible after detection. Vegetation restoration will be performed during or at the end of the growing season. When dike integrity is in question, repair activities will begin immediately.

Blockage at either outlet of the dewatering tile system will be cleared immediately after detection. Damage or disturbance of the concrete manholes on the dewatering tile system will be repaired as soon as possible after detection. Fluid levels in the concrete manholes which indicate partial or full blockage of the dewatering tile system will require jetting or cleaning of the blocked portion of the system as soon as possible after detection. Any surface evidence of collapse in the dewatering tile system will require investigation by sewer camera, open excavation, or other means. If partial or complete collapse has occurred, the affected portion of the system will be repaired and/or replaced as soon as possible after detection.

Leachate Collection System

The primary anticipated maintenance concerns will be pump operations. Should damage or failure occur to this system, repair or replacement of the defective equipment will be performed promptly.

The leachate collection piping will also be maintained by jetting or cleaning out the pipes interior as necessary.

Leak Detection, Collection, and Removal System

The primary anticipated maintenance concerns will be pump operations. Should damage or failure occur to this system, repair or replacement of the defective equipment will be performed promptly. Damaged surface pipes will also be repaired.

Drainage Structures

Ditches that have been damaged due to erosion will be properly repaired. Sediment buildup will be removed where necessary to allow free gravity drainage to the sedimentation basin. Removal of sediment buildup in the sedimentation basins will also be performed as needed to maintain adequate capacity for design flow conditions. The edge drain system may require occasional maintenance via sump clean-out & power-jetting to assure flow & reduce the hydraulic head against perimeter dikes to less than 5 feet of head.

Gas Venting System

Damaged gas venting risers will be repaired or replaced promptly after notification of needed repair. Dislodged gas venting risers will be reset.

Monitoring Wells

The primary anticipated maintenance concerns will be pump operation, security, and casing integrity. Should damage occur to the pumps, they will be repaired or replaced promptly. If damage is done to the locking system or the well casing, it will also be repaired.

Benchmarks

Should the benchmarks be removed or dislodged entirely, they will be reset or re-established at the original location and elevation.

4.0 MONITORING ACTIVITIES

In accordance with 40 CFR Part 264.310(b)(2). during the post-closure care period, the leachate collection and removal system will continue to be operated until leachate is no longer detected. In accordance with 40 CFR Part 264.310(b)(3), the groundwater monitoring system will be maintained and monitored throughout the post-closure period. The leak detection systems will also be maintained and monitored throughout the post-closure period. Surface water at location SS-3, the point of discharge to Quirk Drain, will be monitored every six months per 40 CFR 761.75(b)(6)(i)(C) during the post-closure period. Refer to the environmental monitoring sections contained within this Permit Application for additional information regarding monitoring.

Exhibit C. Revised Groundwater Attachment H and Well Location Map

Ground Water Monitoring Parameter List

A. Primary Parameters (Quarterly)

Benzene	1,2 Dichlorobenzene	Xylene
1,2 Dichloroethane	1,2 Dichloroethene	Ethylbenzene
Methylene Chloride	Toluene	Trichloroethene
1,1,1 Trichloroethane	Vinyl Chloride	1,1 Dichloroethane

PCB-1016[1]	**PCB-1221**[1]	**PCB-1231**[1]
PCB-1242[1]	**PCB-1248**[1]	**PCB-1254**[1]
PCB-1260[1]		

B. Secondary Parameters (Quarterly)

Potassium	Sodium	Nickel
Chromium(t)	Lead	Molybdenum
Sulfate	Chloride	Bicarbonate
Carbonate	Arsenic	Cyanide[4]
Nitrate	Nitrite	Fluoride
Total Phenolics	Total Organic Carbon	Iron

C. Tertiary Parameters (Quarterly)

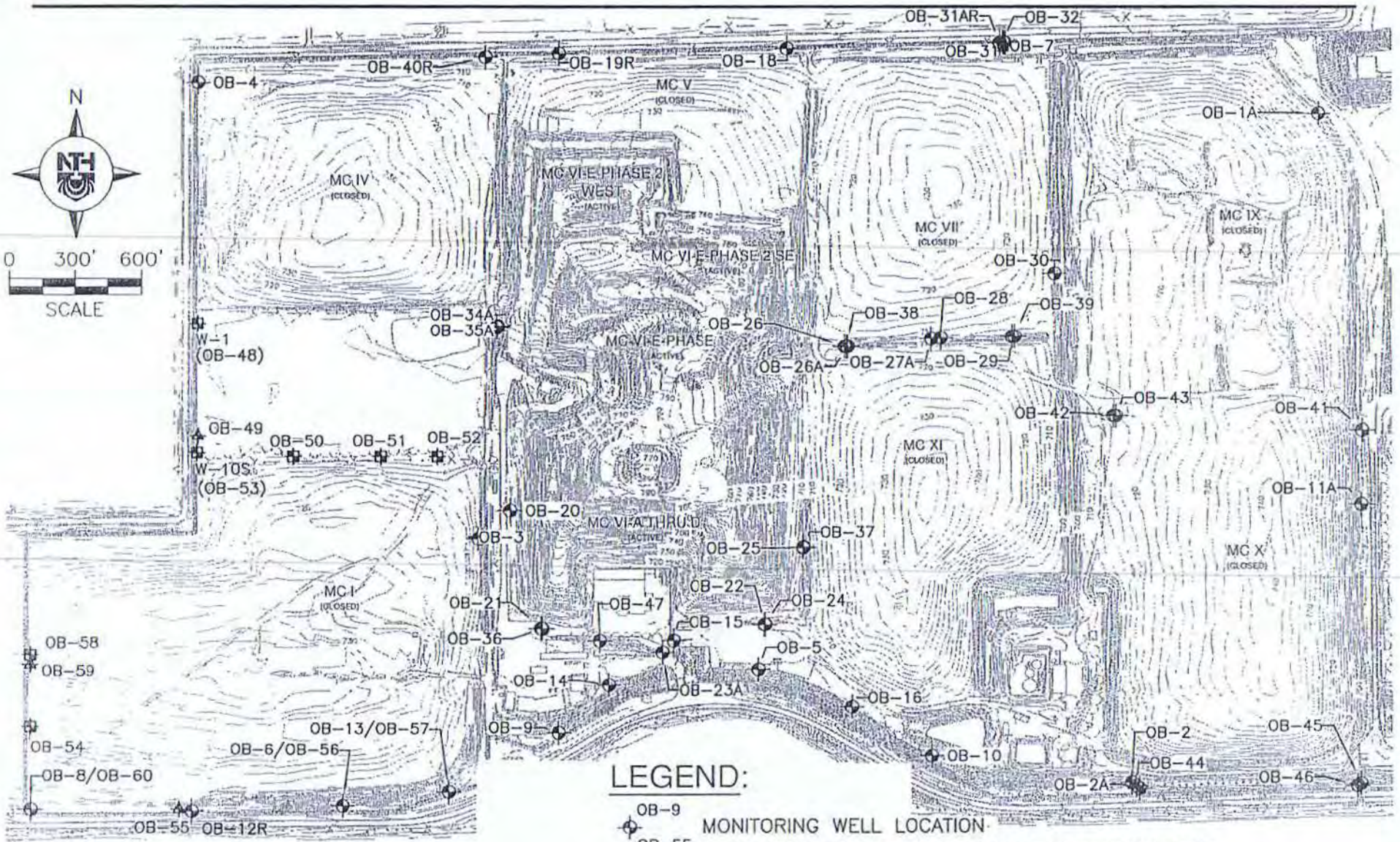
Calcium[2]	Magnesium[2]	Copper[2]
Manganese[2]	Zinc[2]	Cadmium[2]
Silver	Mercury	Selenium
Barium	2,4-D	Endrin
Silvex	Methoxychlor	Toxaphene

D. Field Monitoring Parameters[3]

Specific Conductance Temperature pH

Notes:

1	PCB's to be analyzed in samples from wells OB-21, OB-23, OB-24, OB-34R, OBN-40R, OB-48, OB-49, OB-50, OB-51, OB-52, OB-53, OB-54, OB-55, OB-56,OB-57, OB-58, OB-59 and OB-60.
2	Tertiary parameter that will be measured during detection monitoring.
3.	Parameter to be measured in field for all samples collected
4.	Amenable cyanide to be analyzed if cyanide is detected



LEGEND:

- OB-9 — MONITORING WELL LOCATION
- OB-55 — PROPOSED MC VI F/G BEDROCK WELL LOCATIONS
- OB-54 — PROPOSED MC VI F/G SAND AQUIFER WELL LOCATIONS
- 710 — EXISTING TOPOGRAPHIC CONTOUR

NTH PROJECT No.:	DESIGNED BY:	CHECKED BY:	DRAWING SCALE:	NTH Consultants, Ltd. Infrastructure Engineering and Environmental Services	WAYNE DISPOSAL, INC. SITE NO. 2	GROUNDWATER MONITORING WELL LOCATION MAP	ATTACHMENT:
13060921-06	DLP	DLP	AS SHOWN		VAN BUREN TWP., WAYNE COUNTY, MICHIGAN		A
CAD FILE NAME:	DRAWN BY:	INCEPTION DATE:	PLOT DATE:				
060921-WLM	KRO	11/16/09	10/4/2011				

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Exhibit D. Vibratory Smooth Drum Roller

RITCHIE Specs Everything about Equipment

United States - English

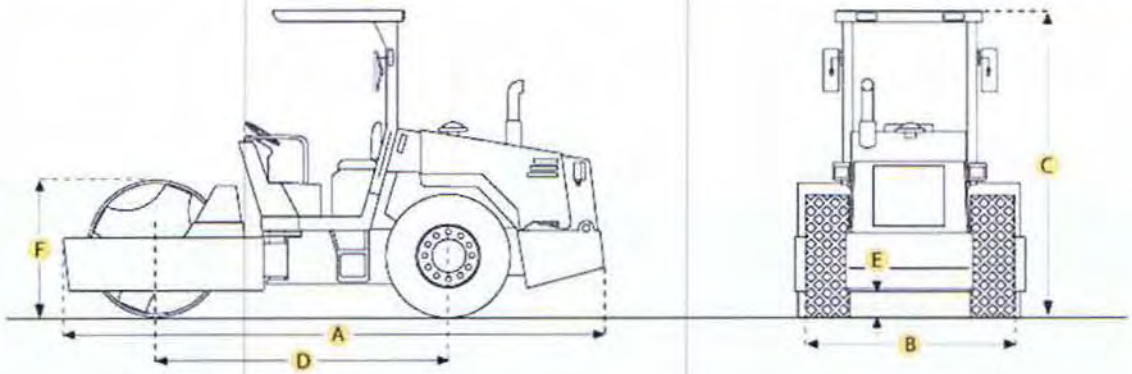
Current number of specifications

CATERPILLAR CS563E VIBRATORY SMOOTH DRUM ROLLER

VIEW ARTICLES ON THIS ITEM

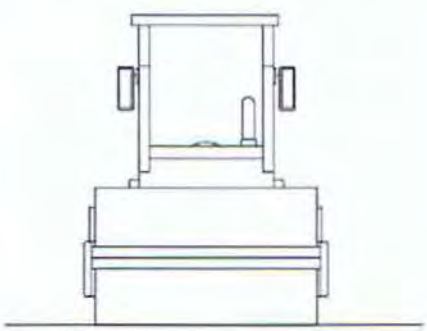
Print specification

Help improve this specification



Selected Dimensions

Dimensions		
A. OVERALL LENGTH	18.9 ft in	5760 mm
C. HEIGHT TO TOP OF CAB	10.1 ft in	3070 mm
D. WHEELBASE	9.5 ft in	2900 mm
E. GROUND CLEARANCE	17.6 in	448 mm



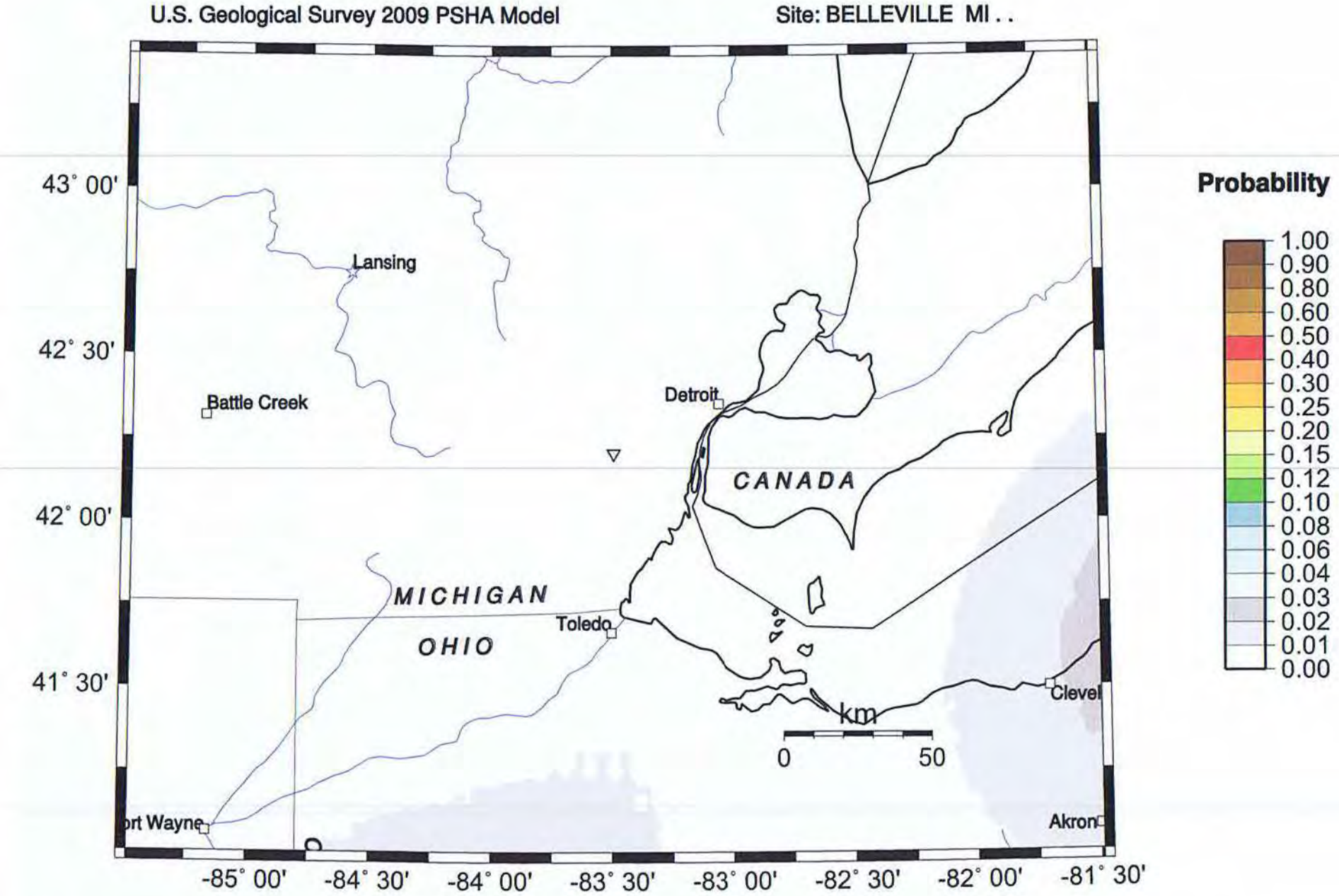
Specification

Engine		
MAKE	Caterpillar	
MODEL	3056E ATAAC	
GROSS POWER	150.2 hp	112 kw
NET POWER	143.5 hp	107 kw
DISPLACEMENT	366.1 cu in	6 L
ASPIRATION	turbocharged	
Operational		
OPERATING WEIGHT	26742.1 lb	12130 kg
FUEL CAPACITY	87.2 gal	330 L
COOLING SYSTEM FLUID CAPACITY	6.9 gal	26 L
ENGINE OIL CAPACITY	3.2 gal	12 L
HYDRAULIC SYSTEM FLUID CAPACITY	16.9 gal	64 L
MAX SPEED	7.1 mph	11.4 km/h
TIRES *IF APPLICABLE	23.1x26	
OPERATING VOLTAGE	24 V	
ALTERNATOR SUPPLIED AMPERAGE	55 amps	
Drum		
DRUM WIDTH	84 in	2134 mm
DRUM DIAMETER	60 in	1524 mm
STATIC LINEAR LOAD	458 lb/in	32.2 kg/cm
VIBRATION FREQUENCY 1	31.9 Hz	
NOMINAL AMPLITUDE - HIGH	0.07 in	1.7 mm
NOMINAL AMPLITUDE - LOW	0.03 in	0.85 mm
CENTRIFUGAL FORCE - HIGH	59799.2 lb	266 kN
CENTRIFUGAL FORCE - LOW	29899.6 lb	133 kN
Dimensions		
OVERALL LENGTH	18.9 ft in	5760 mm
HEIGHT TO TOP OF CAB	10.1 ft in	3070 mm
WHEELBASE	9.5 ft in	2900 mm
GROUND CLEARANCE	17.6 in	448 mm

Viewing Photo 1 of 4

Exhibit E. USGS 2009 PSHA Model

Probability of earthquake with M > 5.0 within 50 years & 50 km



GMT 2012 Oct 8 19:52:49 Earthquake probabilities from USGS OFR 08-1128 PSHA. 50 km maximum horizontal distance. Site of interest: triangle. Epicenters mb>5 black circles; rivers blue.