

Attachment 30A

Corrective Action Management Unit Design Information

Added – \_\_\_\_\_, 2013

## Corrective Action Management Unit (CAMU)

In accordance with R 299.9635, The Dow Chemical Company (Dow) is requesting approval under Operating Permit Condition IX.C.5 for the post-closure use of the former Diversion Basin hazardous waste management unit for operation of a storage and treatment Corrective Action Management Unit (CAMU). The CAMU is proposed in addition to the Staging Pile that was previously approved by the MDEQ in accordance with License Part XI.U, “*Designation of Staging Pile*” and Attachment 30, “*Staging Pile Designation with Design Information*”, added September 30, 2009.

### CAMU DESIGNATION with DESIGN

The CAMU will be operated in the same area that was previously designated for the approved Staging Pile. The CAMU will consist of three constructed containment areas within the Diversion Basin footprint. Dow proposes to manage these as one unit, with one capacity limit and set of performance standards, as described below.

The material expected to be generated onsite for temporary management in the CAMU is consistent with the applicable definitions in R299.9102<sup>1</sup> (“corrective action management unit-eligible waste”) and 40 CFR 260.10<sup>2</sup> (“remediation waste”).

The following provides a discussion of the applicable regulations and how Dow’s Michigan Operations CAMU will meet those requirements.

The Michigan regulations at R299.9635(11) set out the information needs regarding wastes to be managed in the CAMU:

- (a) *The origin of the waste and how it was subsequently managed, including a description of the timing and circumstances surrounding the disposal or release.*

The waste to be stored in the CAMU will consist of contaminated media that may be classified as either characteristically hazardous waste or listed hazardous waste.

CAMU-eligible, listed hazardous waste would likely be classified through the “contained-in” policy and generated as a result of Revetment Groundwater Interception System (RGIS) upgrade or other maintenance activities or other potential corrective actions conducted at the Michigan Operations site.

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<sup>1</sup> **R 299.9102 Definitions** (u) “Corrective action management unit-eligible waste” or “CAMU-eligible waste” means all wastes and hazardous wastes and all media, including groundwater, surface water, soils, sediments, and debris, that are managed for implementing cleanup. As-generated wastes from ongoing industrial operations at a site are not CAMU-eligible.

Notwithstanding this subrule and where appropriate, as-generated non-hazardous waste may be placed in a corrective action management unit if the waste is being used to facilitate treatment or the performance of the corrective action management unit. Wastes that would otherwise meet the definition of a CAMU-eligible waste are not CAMU-eligible wastes if either of the following apply:

- (i) If the wastes are hazardous wastes found during a cleanup in intact or substantially intact containers, tanks, or other non-land-based units found above ground, unless the wastes are first placed in the tanks, containers or non-land-based units as part of the cleanup, or the containers or tanks are excavated during the course of the cleanup.
- (ii) If the director, or the director's designee, uses the authority in R 299.9635 to prohibit the wastes from management in a corrective action management unit.

<sup>2</sup> **40 CFR 260.10 Remediation waste** means all solid and hazardous wastes, and all media (including ground water, surface water, soils, and sediments) and debris, that are managed for implementing cleanup.

***(b) Whether the waste was listed or identified as hazardous at the time of disposal or release.***

Groundwater that is recovered from the RGIS is generally classified as a listed waste, carrying EPA code F039 for multisource leachate (liquids that have percolated through land disposed wastes)<sup>3</sup>. However, environmental media (soil, sediment, etc.) generated as a result of RGIS upgrade or other maintenance activities or other corrective actions may also be considered F039 via the “contained-in” policy<sup>4</sup> depending on the concentrations of constituents of concern. Contaminated media from other corrective actions at Michigan Operations may also be placed in the CAMU, and will be characterized appropriately. These media may carry other EPA waste codes in addition to or in place of the F039 designation. In addition, rainfall onto any CAMU eligible waste in the CAMU is also considered environmental media and will be evaluated under the “contained-in” policy prior to management and final disposition.

***(c) Whether the disposal or release of the waste occurred before or after the land disposal requirements of 40 C.F.R. part 268 were in effect for the waste listing or characteristic.***

The Dow Michigan Operations facility has been in operation for over 100 years and activities at the facility pre-date most RCRA regulations, including the LDRs.

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<sup>3</sup> F039 Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of this part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.)

<sup>4</sup> The contained-in policy was first articulated in a November 13, 1986 EPA memorandum, “RCRA Regulatory Status of Contaminated Groundwater.” It has been updated many times in Federal Register preambles, EPA memos and correspondence, see, e.g., 53 FR 31138, 31142, 31148 (Aug. 17, 1988), 57 FR 21450, 21453 (May 20, 1992), and detailed discussion in HWIR-Media proposal preamble, 61 FR 18795 (April 29, 1996).

## CAMU DESIGN AND OPERATION

The Michigan regulations at R299.9635(12)(a) and (b) are applicable and require that the *areal configuration and applicable design, operation, treatment, and closure requirements* be included in the license and application.

Dow will locate the CAMU within the current Staging Pile area (the former Geotube Containment Facility) that was engineered and constructed over the top of the closed Diversion Basin. An overall plan view of the various CAMU areas is depicted on Drawings B2-903A-994072 – Overall CAMU Plan View. Use of this closed and capped hazardous waste management area provides Dow with a sustainable alternative to developing another area of the plant.

As was determined at the time of the Staging Pile approval, the location and construction of the Geotube Containment Facility provides an ideal site for the CAMU. Two liners currently exist underneath the site, including an 80 mil HDPE geomembrane (GMB) under the topmost asphalt surface in Containment Unit #1 and Containment Unit #2, or exposed in Containment Unit #3 of the Geotube Containment Facility, and a 3-foot thick compacted clay liner which acts as the cap of the Diversion Basin as shown on drawing B2-903A-994072. The new 80 mil HDPE GMB liner for the CAMU will make it a triple-lined facility, not including the surficial asphalt layers.

The proposed CAMU liner system is currently envisioned to include the following elements:

*Typical Cross Section Under CAMU Eligible Waste for Containment Unit #1 and Containment Unit #2 Areas – starting at the existing asphalt and moving upwards (shown in drawings B2-904A-994072 and B2-905A-994072):*

- A 80 mil HDPE GMB;
- A 6 oz/yd<sup>2</sup> geotextile (GTX);
- A 12-inch thick layer of sand; and
- CAMU eligible waste will be placed on top of the sand layer.

*Typical Cross Section Under Earthen Dike for Containment Unit #1 – starting at the existing asphalt and moving upwards (shown in drawing B2-904A-994072):*

- A 80 mil HDPE GMB;
- A 6 oz/yd<sup>2</sup> GTX ;
- Earthen Fill material to construct the earthen dikes (sand, silt, clay and/or stone); and
- A 60 mil HDPE GMB will cover the dikes and be welded to the floor 80 mil HDPE.

A new or existing concrete sump is shown at the low end of the CAMU as needed for leachate collection. Leachate from the CAMU eligible waste materials will flow through the sand layer on the floor and then through a 6A natural stone filter berm and finally into the sump. Pump(s) and an HDPE force main can be installed to transfer all leachate to the Plant sewers for treatment in the on-site waste water treatment plant (WWTP).

Consistent with licensed tank and container dike discharges to Dow's onsite WWTP, leachate will be sampled and analyzed for TOC prior to discharge to the WWTP. Leachate having

concentrations of TOC less than 650 mg/L will be directly discharged to the WWTP. Should the 650 mg/L threshold be exceeded, the liquids will be appropriately treated prior to discharge to the WWTP or incinerated.

The CAMU will be operated such that no releases occur from the unit, either through run-off/run-on or air dispersion of particulates. For example, waste constituents cannot leach out of the soil into the subsurface due to the presence of the engineered cap/liners of the existing containment facility. Run-off/run-on will be prevented by the earthen dikes and other storm water management practices that are routine at the facility. Air dispersion via particulates will be prevented by a variety of methods, depending on the quantity of CAMU-eligible waste materials present in the unit, including, but not limited to, surface tarps or other geomembrane-type temporary covers, daily cover, wetting or other appropriate methods.

Because levels of volatile organic compounds (VOCs) are expected to be low for the vast majority of soils or sediment-like material designated for potential management in the CAMU, ambient air monitoring is not proposed as a routine operating practice. However, should a corrective action or other maintenance project generate soils with elevated levels of VOCs, ambient air monitoring will be addressed in a site- or project-specific work plan submitted to the MDEQ in advance of project implementation. It is expected that ambient air monitoring will be primarily directed at the immediate activities generating the soil. Additional ambient air monitoring around the CAMU will be evaluated on a case-by-case basis in consultation with the MDEQ.

Truck and heavy equipment access to the CAMU will be provided by ramps at the high end of the facility. Trucks hauling waste soils will be tarped and have sealed tailgates. The trucks will enter the CAMU, deposit their load and then be decontaminated with brooms and shovels prior to exiting the facility.

The soils will be stockpiled with low ground pressure bulldozers and/or hydraulic excavators and will be placed on 1 vertical to 2 horizontal slopes or flatter if needed for stability.

Other technologies may be used as the preferred dewatering method for a particular project; sediment-like or slurried material will be pumped into material handling equipment (Geotubes or other) and the liquid fraction from the dewatering operation will be collected, characterized and disposed through the WWTP as proposed. Contaminated water may also be pretreated within the CAMU Containment Units prior to discharge to the WWTP.

The CAMU will operate under EPA process codes S99 (“Other Storage”) and T04 (“Other Treatment”) as reflected in the Part A application. Typical capacities for remediation projects using these codes are as follows:

- **S99:** for CUs #1/#2 - 26,500 cubic yard storage capacity and for CU #3 – 1,000,000 gallons
- **T04:** treatment capacity of 2,000,000 gallons/day for dewatering/treatment and 6,500 cubic yards/day for stabilization/solidification/debris.

Examples of treatment that may be conducted in the CAMU include dewatering, addition of appropriate absorbents, stabilization, solidification or treatment of hazardous debris using one or more treatment technologies specified in Table 1 of R268.45. Final treatment for the CAMU-eligible waste can include incineration, or as appropriate, disposal on- or off-site in an authorized

facility. Specific treatment options will be defined in a site- or project- specific work plan submitted to MDEQ in advance of project implementation. In addition, the work plan preparation will include a step to evaluate the applicability of any other environmental permits and ensure these are in place and/or to provide appropriated notifications for discharges or other similar items.

### **CAMU CLOSURE PLAN**

At the conclusion of the CAMU authorization or a decision to permanently cease CAMU use, closure of the CAMU will begin. Closure will begin with removal and disposal of any remaining waste within the CAMU. Next, any additional operational materials will be properly characterized and disposed.

The asphalt or HDPE liner floor of the Containment Facility area(s) on which the CAMU material was located will be decontaminated with a water wash following removal and disposal of all CAMU elements. Decontamination water, if generated, will be properly characterized through TOC analysis and sent to the plant sewer for treatment in the on-site WWTP.

Closure of the CAMU will be completed within 180 days of the initiation of closure activities (see tabulated depiction of the closure schedule below), unless Dow submits an extension request to MDEQ. Dow will provide MDEQ with a “Notice of Completion of Closure” and a brief closure report documenting final disposition of CAMU materials. Upon completion of closure activities, Dow will provide the MDEQ with a license modification request to either:

1. Designate a new CAMU within the facility to facilitate a reliable, effective and protective remedy; or
2. Remove the designation for the CAMU within the facility.

The closure activities outlined above have been designed to satisfy the closure requirements for CAMU located in previously contaminated areas that are contained in 40 CFR 264.554 (j).

### **Anticipated Closure Schedule for CAMU**

| <b>Activity</b>  | <b>Days</b> |
|--|-------------|
| Cease CAMU use   | 0           |
| Removal/disposal of final waste inventory                  | 30          |
| Removal/disposal of facility components                    | 60          |
| Cleaning of floor and facility demolition                  | 90          |
| Completion of closure and report submittal to the director | 180         |

## FEDERAL REGULATORY DISCUSSION

The Michigan regulations at R299.9635(15) discuss specific time limits and performance criteria that must be met for CAMUs which are used for storage or treatment only, in which waste will not remain after closure. These units must operate for a time limit established by the director, that is no longer than necessary to achieve a timely remedy selected for the waste and are subject to the federal requirements for staging piles in 40 CFR §§264.554(d)(1)(i) and (ii), (d)(2), (e), (f), (j), and (k) instead of specific Michigan regulations in R299.9635(10) and (12) (d) – (f). A discussion of those federal regulations and how Dow is complying with them follows.

### ***264.554(d) Performance criteria:***

#### ***(1)(i) The staging pile must facilitate a reliable, effective and protective remedy;***

The nature of the Dow Michigan Operations corrective action program is such that it is a long term, multi-site project with the potential for a large quantity of remediation waste to be generated. The most protective and cost effective way for Dow to manage that waste is to incinerate the material on-site. The nature of the contaminants is such that they are amenable to incineration and the incinerator is managed in such a way (permit-required operating parameters and controls) as to be a reliable and protective treatment technology. However, the through-put of the incinerator and the possible quantities of remediation waste to be generated require that Dow have a designated accumulation area for these materials that is licensed and managed in accordance with the pertinent regulations. The CAMU would satisfy this need and will allow multiple corrective action projects to be conducted simultaneously, thus expediting the corrective action process for the facility as a whole.

#### ***(ii) The CAMU must be designed so as to prevent or minimize releases of hazardous wastes and hazardous constituents into the environment, and minimize or adequately control cross-media transfer, as necessary to protect human health and the environment (for example, through the use of liners, covers, run-off/run-on controls, as appropriate); and***

The CAMU will be located within the Dow facility, and Dow's 24-hr site security force will control access. The plant is surrounded by an access-prevention fence and natural barriers, and points of entry are guarded to prevent unauthorized access. Routine security patrols of the complex are also conducted. On-site management will reduce risk associated with off-site transport. Additionally, the CAMU's protective, engineered liner will ensure that material is managed in a manner that is protective of human health and the environment.

The design of the unit, as discussed above, will prevent releases to the subsurface and includes the two liners currently existing underneath the site, an 80 mil HDPE geomembrane (GMB) under the topmost asphalt surface of the Containment Facility and a 3-foot thick compacted clay liner which acts as the cap of the Diversion Basin (drawings B2-903A-994072, B2-904A-994072 and B2-905A-994072).

Because of the conservative design and location of the CAMU, Dow believes that the independent, registered professional engineering certification referenced in 40 CFR 264.554 is not necessary to ensure that the CAMU is protective of human health and environment and can be waived by the Director as allowed in the Rule.

***(2) In setting the standards and design criteria, the Director must consider the following factors:***

***(i) Length of time the CAMU will be in operation;***

The length of time the CAMU will be operated will ultimately be determined by the schedule of corrective actions at the facility. However, the need for the CAMU will be evaluated at each license renewal period (approximately every 10 years) and the license renewal applications will reflect the request to reauthorize the CAMU as necessary.

***(ii) Volumes of wastes you intend to store in the CAMU;***

The CAMU as designed will have a maximum capacity of ~ 26,500 cubic yards (CY) of CAMU-eligible waste material (based on the design capacity of the area). CAMU Containment Unit #1 can hold 24,000 CY and CAMU Containment Unit #2 can hold 2,500 CY. The projected total capacity is the maximum that the unit can actually accommodate, not the expected volumes that will be stored at any one time.

CAMU Containment Unit #3 is reserved for CAMU-eligible waste liquids or other contaminated run-off/run-on with a storage volume of 1 million gallons. A cross-section of CAMU Containment Unit #3 is shown on drawing B2-903A-994072.

***(iii) Physical and chemical characteristics of the wastes to be stored in the unit;***

The CAMU-eligible waste to be stored in the unit will consist of contaminated media and other materials that meet the definition that may be classified as hazardous waste (F039) through the “contained-in” policy as described above if generated from RGIS upgrade or maintenance activities. Contaminated media from other corrective actions at Michigan Operations may also be placed in the CAMU, and will be characterized appropriately prior to final disposition. These media may carry other EPA codes in addition to or in place of the F039 designation.

***(iv) Potential for releases from the unit;***

As previously discussed the CAMU will be designed and managed to prevent the potential for any releases from the unit.

***(v) Hydrogeological and other relevant environmental conditions at the facility that may influence the migration of any potential releases; and***

The design for the existing Geotube Containment Facility which will also serve as the CAMU includes an asphalt surface underlain by an 80 mil HDPE liner, under which is a 3-foot thick clay layer (see below for more detailed construction details). The potential for migration of any potential releases is virtually nonexistent.

Additionally, any ignitable/reactive waste placed in the CAMU (if present and not de-characterized) will be managed consistent with 40 CFR 264.17(b) and Attachment 9 of the license as required by statute.

Contact storm water will be characterized appropriately based on the environmental media it has come in contact with (for example F039 media from RGIS activities), and through application of the “contained-in” policy will be managed accordingly.

***(vi) Potential for human and environmental exposure to potential releases from the unit;***

The CAMU will be located within the Dow facility, and Dow's 24-hr site security force will control access. The plant is surrounded by an access-prevention fence and natural barriers, and points of entry are guarded to prevent unauthorized access. Routine security patrols of the complex are also conducted. On-site management will reduce risk associated with off-site transport. Additionally, the CAMU's protective, engineered liner will ensure that material is managed in a manner that is protective of human health and the environment.

***(e) May a staging pile receive ignitable or reactive remediation waste? You must not place ignitable or reactive remediation waste in a staging pile unless:***

***(1) You have treated, rendered or mixed the remediation waste before you placed it in the staging pile so that:***

***(i) The remediation waste no longer meets the definition of ignitable or reactive under § 261.21 or § 261.23 of this chapter; and***

***(ii) You have complied with § 264.17(b); or***

***(2) You manage the remediation waste to protect it from exposure to any material or condition that may cause it to ignite or react.***

It is unlikely, based on the historical waste management practices and known characteristics of potential remediation waste sources at the facility, that any CAMU-eligible waste will be ignitable or reactive. However if this does occur, any ignitable/reactive waste placed in the CAMU (if present and not de-characterized) will be managed consistent with 40 CFR. 264.17(b) and Attachment 9 of the license as required by statute.

***(f) How do I handle incompatible remediation wastes in a staging pile? The term "incompatible waste" is defined in § 260.10 of this chapter. You must comply with the following requirements for incompatible wastes in staging piles:***

***(1) You must not place incompatible remediation wastes in the same staging pile unless you have complied with § 264.17(b);***

***(2) If remediation waste in a staging pile is incompatible with any waste or material stored nearby in containers, other piles, open tanks or land disposal units (for example, surface impoundments), you must separate the incompatible materials, or protect them from one another by using a dike, berm, wall or other device; and***

***(3) You must not pile remediation waste on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to comply with § 264.17(b).***

It is unlikely, based on the historical waste management practices and known characteristics of potential remediation waste sources at the facility, that incompatible wastes will be generated and thus issues of storage will not occur. However if this does occur, incompatible wastes will be managed using segregation practices.

***(j) What is the closure requirement for a staging pile located in a previously contaminated area?***

***(1) Within 180 days after the operating term of the staging pile expires, you must close a staging pile located in a previously contaminated area of the site by removing or decontaminating all:***

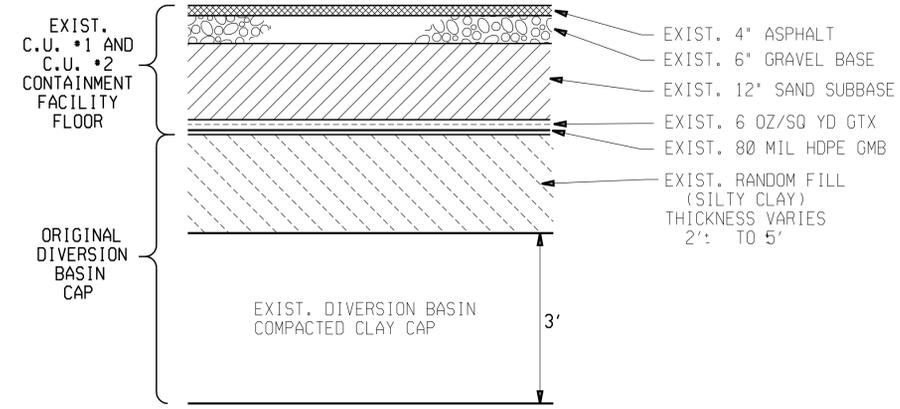
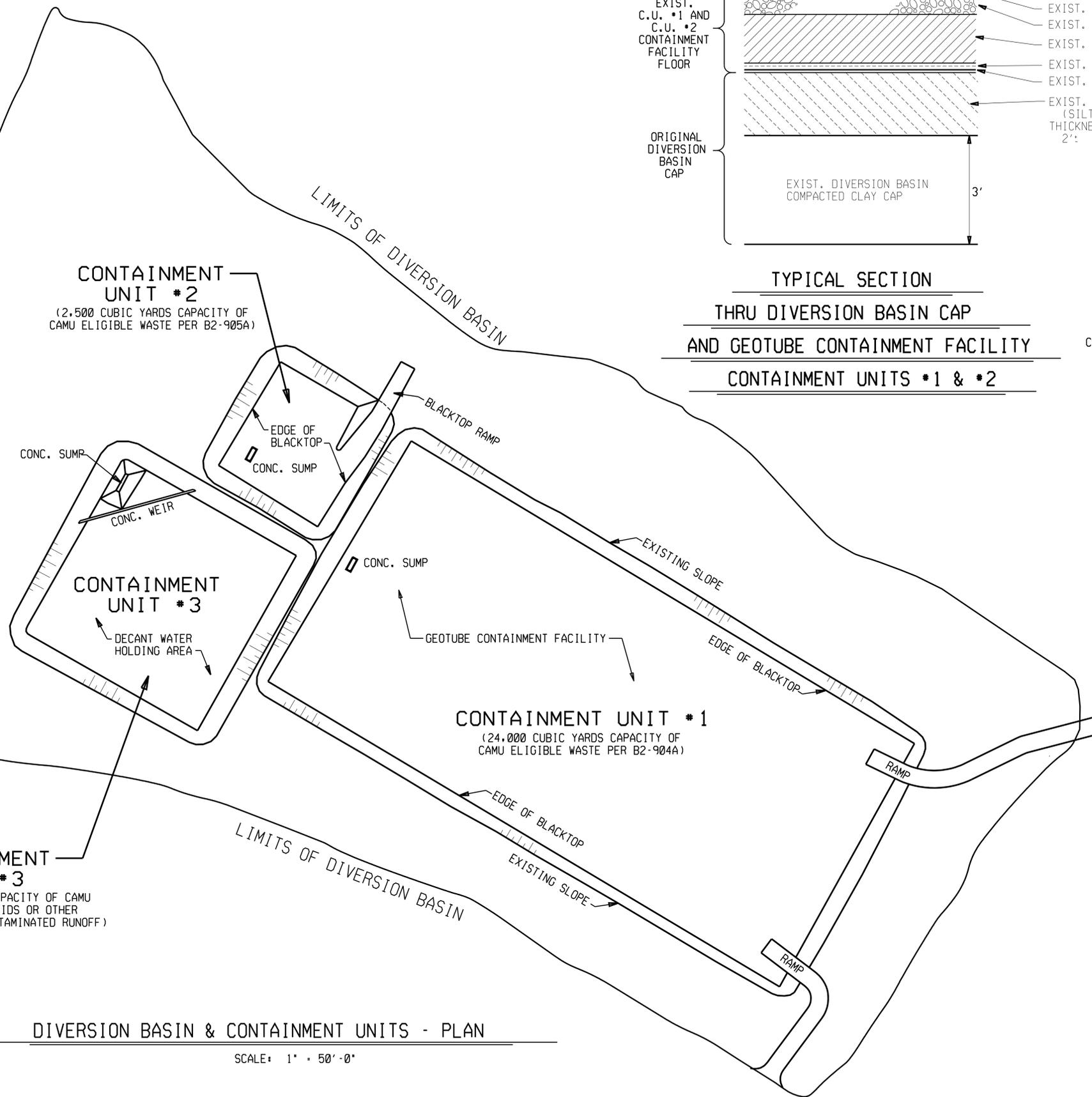
***(i) Remediation waste;***

- (ii) Contaminated containment system components; and*
- (iii) Structures and equipment contaminated with waste and leachate.*
- (2) You must also decontaminate contaminated subsoils in a manner and according to a schedule that the Director determines will protect human health and the environment.*
- (3) The Director must include the above requirements in the permit, closure plan, or order in which the staging pile is designated.*

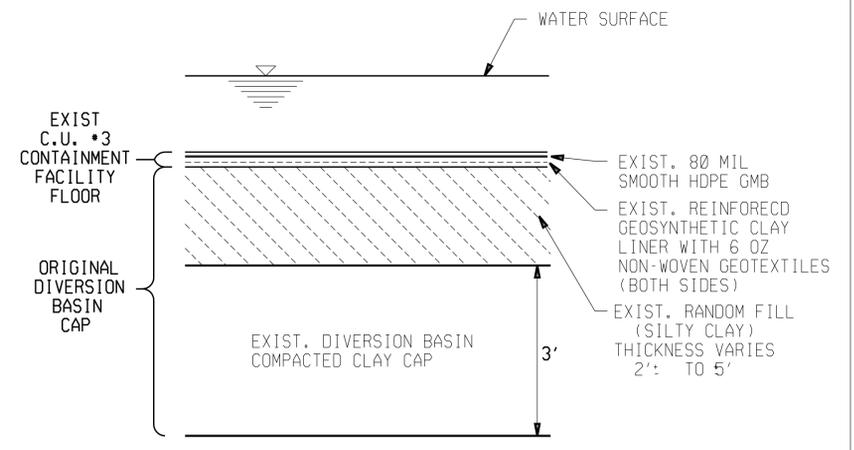
Waste will not be left in-place at final closure, therefore the closure activities will be limited to cleaning/decontaminating the asphalt surface of the containment basins and verifying that cleaning/decontaminating process through sampling of rinsate water.

- (k) What is the closure requirement for a staging pile located in an uncontaminated area?*
- (1) Within 180 days after the operating term of the staging pile expires, you must close a staging pile located in an uncontaminated area of the site according to §§ 264.258(a) and 264.111; or according to §§ 265.258(a) and 265.111 of this chapter.*
- (2) The Director must include the above requirement in the permit, closure plan, or order in which the staging pile is designated.*

Not applicable to the Dow Michigan Operations CAMU.



**TYPICAL SECTION  
THRU DIVERSION BASIN CAP  
AND GEOTUBE CONTAINMENT FACILITY  
CONTAINMENT UNITS #1 & #2**



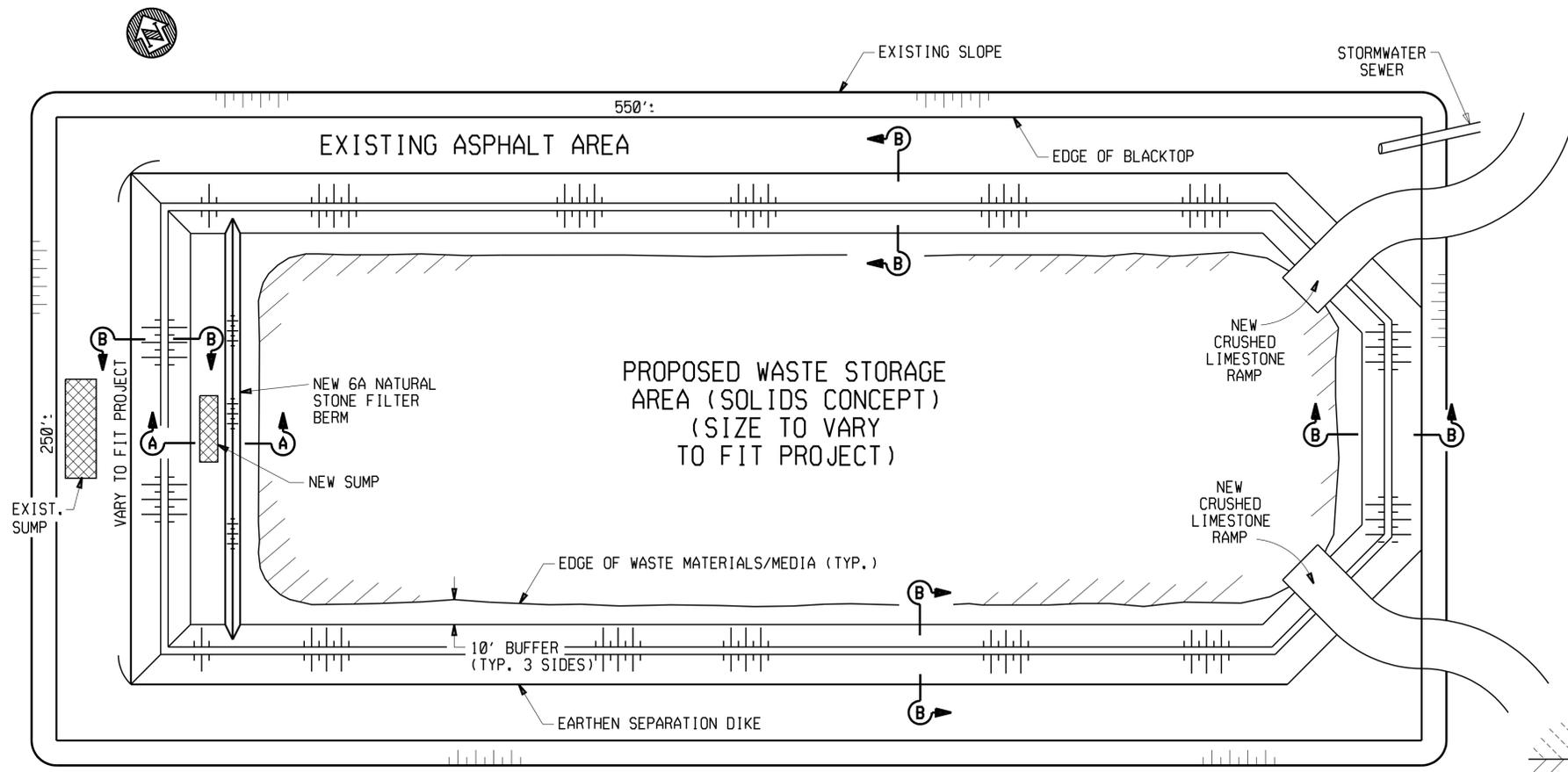
**TYPICAL SECTION  
CONTAINMENT UNIT #3**

**DIVERSION BASIN & CONTAINMENT UNITS - PLAN**

SCALE: 1" = 50'-0"

REFER TO THE DOW CHEMICAL COMPANY OPERATING LICENSE, ATTACHMENT 30 CORRECTIVE ACTION MANAGEMENT FOR ADDITIONAL INFORMATION.  
CAMU - CORRECTIVE ACTION MANAGEMENT UNIT

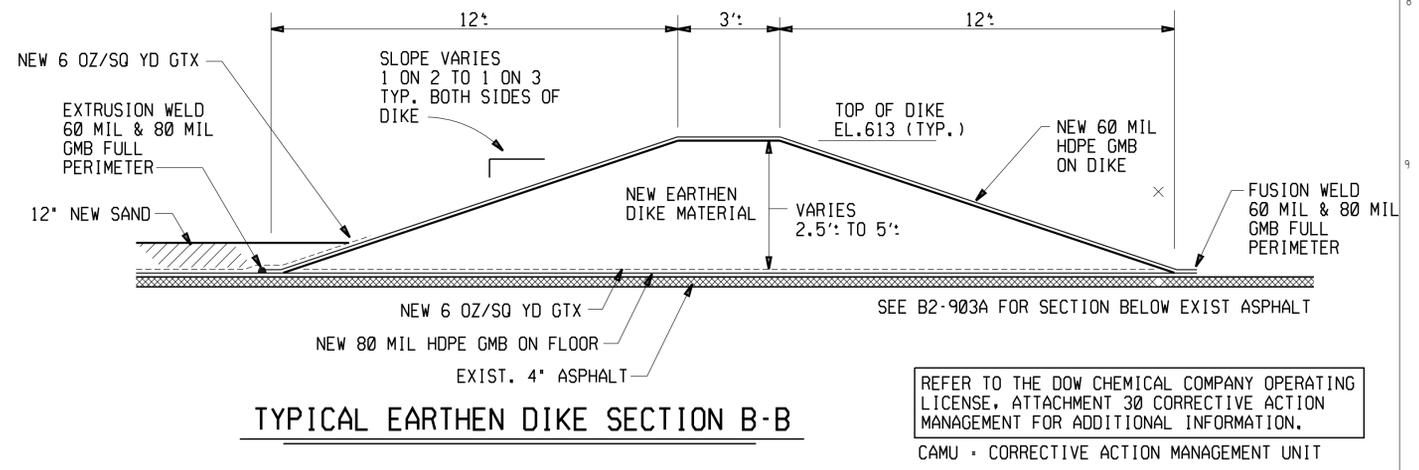
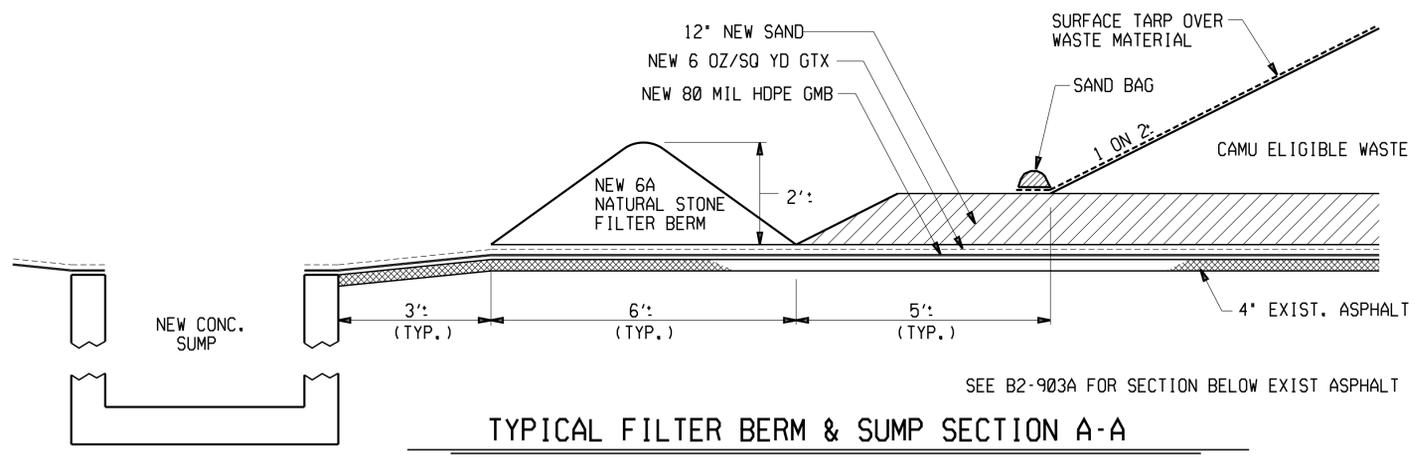
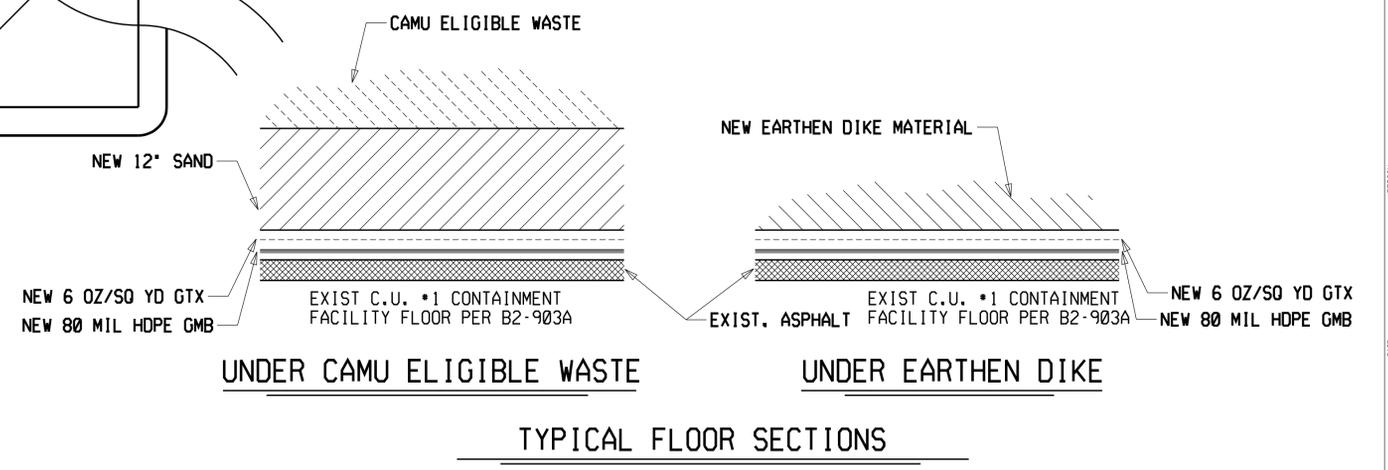
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|-----------|----------|----|-----|-----|------|---|----------------------|-------------|-----------------|--------|-----------|-----------|---|
| REV. MARK | REVISION | BY | CHK | APP | DATE | CONSULTANT  | DRAWING ISSUE RECORD | DESIGNED    | URS CORPORATION | 8/2012 | STATUS    | PLANT NO. | THE DOW CHEMICAL COMPANY<br>CONTAINMENT UNIT<br>OVERALL CAMU - PLAN VIEW<br>PROJECT NUMBER: XXXXXX<br>SCALE: NONE<br>B2-903A-994072<br>PRINTED: _____<br>VER: _____ |
|           |          |    |     |     |      | URS CORPORATION<br>GRAND RAPIDS, MI.<br>3950 SPARKS DR., S.E. |                      | DRAWN       | URS CORPORATION | 8/2012 | P.E. SEAL |           |   |
|           |          |    |     |     |      | URS CORPORATION<br>WILAND, MI.<br>1878 BUILDING, DOOR 1       |                      | CHECKED     | URS CORPORATION | 8/2012 |           |           |   |
|           |          |    |     |     |      | URS PROJECT NUMBER: 41569229                                  |                      | APPROVED    | S. LUCAS        | 8/2012 |           |           |   |
|           |          |    |     |     |      |   |                      | PROJ. ENGR. | S. LUCAS        | 8/2012 |           |           |   |
|           |          |    |     |     |      |   |                      | MFG. REP.   | S. LUCAS        | 8/2012 |           |           |   |



**NOTES:**

1. THE WIDTH & LENGTH OF THE WASTE STORAGE AREA FACILITY WILL VARY TO FIT THE WASTE STORAGE VOLUME REQUIREMENTS OF THE PROJECT.
2. IN CONTAINMENT UNIT #1 (SOLIDS CONCEPT) STORMWATER RUN-ON IS EXPECTED TO BE NON-CONTACT-STORMWATER, SEPERATED FROM WASTE BY EARTHEN SEPERATION DIKES, AND MANAGED AS NON-CONTAMINATED RUN-OFF.
3. WASTE STORAGE AREA (SOLIDS CONCEPT) SHOWN TO LEFT IS APPROXIMATELY 190' X 475'. THE ESTIMATED MAXIMUM STORAGE VOLUME OF THE WASTE STORAGE AREA IN CONTAINMENT UNIT #1 IS APPROXIMATELY 24,000 CUBIC YARDS.

**CONTAINMENT UNIT #1  
PLAN VIEW - SOLIDS CONCEPT**



REFER TO THE DOW CHEMICAL COMPANY OPERATING LICENSE, ATTACHMENT 30 CORRECTIVE ACTION MANAGEMENT FOR ADDITIONAL INFORMATION.  
CAMU - CORRECTIVE ACTION MANAGEMENT UNIT

|                                     |          |    |     |     |      |                 |  |             |                 |  |           |           |
|-------------------------------------|----------|----|-----|-----|------|-----------------|--|-------------|-----------------|--|-----------|-----------|
| REV. MARK                           | REVISION | BY | CHK | APP | DATE | CONSULTANT      | DRAWING ISSUE RECORD   | DESIGNED    | URS CORPORATION | 8/2012   | STATUS    | PLANT NO. |
|                                     |          |    |     |     |      | URS CORPORATION |  | DRAWN       | URS CORPORATION | 8/2012   | P.E. SEAL |           |
|                                     |          |    |     |     |      | URS CORPORATION |  | CHECKED     | URS CORPORATION | 8/2012   |           |           |
|                                     |          |    |     |     |      | URS CORPORATION |  | APPROVED    | S. LUCAS        | 8/2012   |           |           |
|                                     |          |    |     |     |      | URS CORPORATION |  | PROJ. ENGR. | S. LUCAS        | 8/2012   |           |           |
|                                     |          |    |     |     |      | URS CORPORATION |  | MFG. REP.   | S. LUCAS        | 8/2012   |           |           |
| <p>URS PROJECT NUMBER: 41569229</p> |          |    |     |     |      |                 | <p>THE DOW CHEMICAL COMPANY</p> <p>CONTAINMENT UNIT</p> <p>C.U. #1 - WASTE STORAGE AREA (SOLIDS CONCEPT)</p> |             |                 | <p>PROJECT NUMBER XXXXXX</p> <p>SCALE NONE</p> <p>B2-904A-994072</p> |           |           |



