

SECTION II.K
SALZBURG LANDFILL
CLOSURE PLAN

Required Under 40 CFR Part 270.14(b) (13),
Part 264 Subpart C & 264.310 & Michigan Act 451, Part 111 R. 299.9613

Introduction and Scope

This section outlines the Closure Plan for the Salzburg Landfill (Landfill). The Plan describes activities related to construction of the cap, disposal or decontamination of equipment, structures and soils, long term monitoring, and inspection and maintenance activities required during post-closure. The Plan is intended to satisfy the requirements for cell closure in accordance with current regulations, including MDEQ's R 299.9613 (Rule 613) regarding closure and post-closure of this facility and the closure and post-closure provisions of 40 CFR 264.310 subpart N – Landfills.

Closure Performance Standard

The Salzburg Landfill Closure Plan is designed to ensure that the facility is closed in a manner that minimizes the need for further maintenance; and controls, minimizes or eliminates, to the extent necessary to protect human health or the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, surface water, or atmosphere.

If evidence of leaks or spills is detected, samples will be taken and analyzed to determine the extent, if any, of contamination in the soil, groundwater, surface water or air. If contamination that can be attributed to the operation or closure of the facility is determined to be present; and the contamination is at concentrations sufficient to pose a threat to human health or the environment; then the most suitable alternative to remedy the contamination will be implemented to ensure protection of public health and the environment.

The closure requirements of 264 Subpart G for containers, tanks, surface impoundments, waste piles, land treatment and incinerators are not applicable to this Closure Plan as they are not part of the Landfill facility.

Description of Cell Closure

See Salzburg Landfill Engineering Plans, Section VI of this application for a complete description of the cell and cap construction, closure, and the extent of the operations which will remain open during the active life of the Facility.

Description of Final Facility Closure

See Salzburg Landfill Engineering Plans, Section VI of this application for a complete description of final facility closure (capping layout).

Maximum Inventory of Wastes

Waste is not stockpiled at the facility for future disposal. Waste is brought to the facility only when there is a licensed, active cell in which it can be placed. No storage or

treatment occurs at the landfill. The total volume of waste placed in the cells is restricted by the design of the cell size and the thickness/amount of daily cover required.

Equipment Disposal/Decontamination and Soil Removal

All equipment used for cap construction that contacts waste material will be thoroughly cleaned before being used on another project task or leaving the work site. The cleaning will be conducted at the facility vehicle wash building (3601 Building) using pressurized water. All equipment will be washed until visibly clean.

The wash water is transferred via pipeline to the The Dow Chemical Company, Michigan Operations, NPDES permitted Waste Water Treatment Facility.

Once waste disposal activities cease at the facility, the areas outside the cells and the access roads will be sampled if necessary to determine if any surface contamination exists. Samples will be analyzed for the primary detection parameters commonly detected in the leachate. Any soil found to have significant levels of contamination above background will be removed and properly disposed of in the remaining active cell. At final facility closure, the facility building and vehicle wash building will be demolished and removed. Any operating equipment leaving the site will be washed before removal.

Within 60 days before the date on which the owner expects to begin partial or final closure of any or all hazardous waste cells, the owner or operator will notify the director in writing of the intended date proposed to initiate closure. A copy of the current Closure Plan for the hazardous waste cells being closed will accompany the notification. Certification of closure and a survey plan for waste locations will be completed and submitted to the Director within 60 days of completion of closure of each hazardous waste cell. The certification will be submitted by registered mail and will indicate that the hazardous waste cells were closed in accordance with the approved closure Plan. The certification will be signed by a registered professional engineer.

Groundwater Monitoring, Leachate Collection, Run-On, Run-Off, and Wind Dispersal Control

Groundwater monitoring will continue during closure in accordance with the Environmental Monitoring Plan outlined for the active facility life.

The leachate collection and removal system is operated automatically and controlled by a level detection device in the collection system. The collection system pump automatically removes the leachate and transfers it to the Michigan Operation's NPDES permitted Wastewater Treatment Facility via pipeline.

Control of pollutant migration via groundwater is accomplished by the cell liner system. The liner failure detection system is routinely analyzed to confirm the effectiveness of the cell liner system.

Control of pollutant migration via surface water is accomplished by prohibiting stormwater or snow melt run-off from the active areas of the cells. The leachate collection system, earthen berms and/or surface water ditches external to the cells were

constructed to accomplish run-off control and will be modified if necessary to maintain effectiveness.

Should analysis of any environmental media monitored indicate that contaminant levels exist which may create a hazard to human health or the environment, the levels will be reduced using the most suitable alternative to control the discharge.

Should there be a noticeable odor at the fenceline originating from the landfill, the odor will be eliminated or controlled using the most suitable alternative.

Closure Schedule

The closure activities will be completed in accordance with a formal Closure Plan that will be submitted to the MDEQ for approval. Closure activities for a typical cell closure are shown in Table II.K-1. See Section VI, Part II for cap construction details referred to in the schedule. A more precise schedule will be submitted to the MDEQ for each specific cell closure project.

Notification of Partial Closure and Final Closure

The MDEQ will be notified in writing at least 60 days prior to the date closure is expected to begin.

Time Allowed for Closure

Dow Chemical Company will make all efforts to maintain the closure schedule and avoid requesting an extension of closure time.

Closure and Post-Closure Care

Surveying

The facility benchmark is resurveyed every three (3) years by checking the benchmark elevation against the nearest USGS benchmark located outside of the facility.

TABLE 1
 TYPICAL CELL CLOSURE SCHEDULE

ACTIVITY	WORK DAYS								
	20	40	60	80	100	120	140	160	180
1. Mobilization	██████████								
2. Site Grading & Gas Vent Installation	██████████								
3. Subbase Preparation		██████████							
4. Clay Liner Component (GCL)		██████████	██████████	██████████	██████████				
5. Synthetic Liner Component (40 mil HDPE GMB)		██████████	██████████	██████████	██████████				
6. Drainage Collection Layer (GDM)		██████████	██████████	██████████	██████████	██████████			
7. Erosion - Freeze Protection Layer (Cover Soil, Topsoil & Vegetative Cover)		██████████	██████████	██████████	██████████	██████████	██████████		
8. Closure Certification					██████████	██████████	██████████	██████████	██████████

SECTION II.L

POST-CLOSURE PLAN

Required Under 40 CFR Part 270.14 (b)(13),

Part 264 Subpart G & Michigan Act 451, Part 111 R.299.9613

Post – Closure Plan

This plan outlines the concepts of post-closure care that will be followed when the Salzburg Landfill is closed under the Closure Plan in the previous section. Prior to closure, Dow will prepare a more detailed post-closure plan, including a post-closure groundwater monitoring program. The post-closure plan will be submitted to the Michigan Department of Environmental Quality, Waste and Hazardous Materials Division (MDEQ-WHMD) for review and approval prior to implementation.

Any deterioration or malfunction of equipment or structures revealed by an inspection will be corrected on a schedule to ensure that the condition does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, or closure plan design specifications are impacted, notification will be provided to the MDEQ, and corrective action taken accordingly.

Post-closure care will be continued for thirty (30) years or the time duration necessary to protect human health and the environment. Post-closure use of the property will be restricted such that the integrity of the final cover, liners, and all other components of the Landfill, as well as functioning of the monitoring systems will be maintained.

The entire Landfill site will remain fenced, and access gates will be kept closed. Warning signs will be posted with the legend “Danger-Unauthorized Personnel Keep Out”.

The following sections outline the activities associated with the Post-Closure Plan.

Description of Planned Inspection Activities

Landfill elements that will be inspected are included in the text below. Most features of Salzburg Landfill will be inspected on a quarterly basis throughout post-closure; some landfill elements not inspected on a quarterly basis are noted below with their alternate schedule. The Post-Closure Inspection Log is located in Section II.E, Inspection Schedule. Any maintenance or repairs noted in the inspection logs will be brought to the attention of the Landfill Technical Advisor in order to address them. The actions completed will then be documented in the inspection log. Maintenance activities recorded on the Landfill inspection logs will be described in the Annual Report.

Site security - Warning signs, gates, and the fence will be checked weekly by Dow Security staff. The electrical equipment at the sites, such as pumps and valves, will continue to be monitored via computer to detect any malfunction or tampering.

Cap Inspections

- Erosion – The landfill cap slopes will be checked quarterly for erosion during spring and fall periods when the ground is not frozen.
- Vegetative Cover – The vegetative cover will be checked quarterly for adequacy. The vegetative cover will be cut when deemed necessary. The rule of thumb will

be that mowing will be performed when the vegetative cover reaches approximately twelve (12) inches in height. The workers performing the mowing will make a visual inspection of the caps for erosion, settlement and washouts and will report any findings to Dow personnel. Dow will address such problems appropriately.

- Burrowing Animals – The site will be inspected for burrowing animals; none should be present.
- Settlement – The top of the closed cells will be inspected quarterly for ponding. In addition, at least one inspection per year will be made during or following a rain event to observe ponding in any depressions that may have formed due to settling. The closed cells will be surveyed on a routine schedule according to the Cap Elevation Survey Plan, Appendix 1 to this Section. This survey program will be utilized to evaluate long-term cap stability and/or subsidence.
- Gas Venting Systems – The installed gas venting system will be inspected annually.

Run-on and run-off – The surface water ditches external to the Landfill cells will be checked quarterly to ensure adequate drainage.

Liner Failure Detection System – Lift stations, pumps, visible piping, and instrumentation will be checked for proper operation monthly. .

Leachate Collection System – Leachate lift stations will be checked monthly to ensure pumps, instrumentation, and visible collection pipes are operating properly. If leachate generation rates decline to 10% of active operation flow rates, the inspection frequency will be reduced to twice per year.

Groundwater Monitoring Wells – The condition of the well casings, caps, and pumps will be checked semi-annually as the wells are sampled.

Benchmarks – Inspection of the site benchmark will be performed every three years by cross checking the landfill benchmark elevation to the elevation readings of the nearest in-plant Dow benchmark. The most recent survey of the benchmark elevations were performed during the Fourth Quarter 2005.

Maintenance Activities

Security – Signs will be replaced as needed. Soil at the base of the fence will be re-graded as needed to maintain security. The fence will also be maintained as necessary to provide adequate site security.

Cap Inspections

- Erosion – Washouts will be repaired whenever they are detected. When integrity of the cap is threatened, corrective measures will begin as soon as possible.

Restoration of vegetative cover will be performed during or at the end of the growing season.

- Vegetative Cover – Maintenance of vegetative cover will include reseeded, watering, and fertilizing as needed. Trees or brush growth will be prevented over the constructed cell cap.
- Burrowing Animals – Eliminate burrowing animals and maintain/repair burrows, as necessary.
- Settlement – Settlement becomes an issue when drainage is no longer sufficient to reduce ponding, etc. and may need to be repaired. Major repairs may need prior approval before repairs are implemented.
- Gas Venting Systems – Gas vents will be reset in the cap if they are dislodged. Damaged vents will be repaired or replaced.

Run-on and Run-off – Draining sumps and ditches will be cleaned and maintained to allow free drainage so that the retention of stormwater on site does not occur.

Leachate Collection System and Liner Failure Detection System – The primary anticipated maintenance concern will be pump operation and instrumentation. Should any damage or failure occur to pumps or related instrumentation, repair or replacement of the defective equipment will be performed.

Groundwater Monitoring Wells – Where dedicated sample pumps are present, the primary anticipated maintenance concern will be pump operation. Should damage occur to the sample pumps, they would be repaired or replaced. Should the casing to a well be moved or damaged, or otherwise yield non-representative samples, it will be repaired or replaced if necessary.

Benchmarks – Should the benchmark be moved during excavation or otherwise damaged, it will be reset in the ground and the elevation will be re-established by resurveying.

Deed Restriction and Cap Integrity

A notation in the deed has been completed informing potential purchasers that the land has been used to manage hazardous wastes and its use is restricted under 40 CFR Part 264 Subpart G.

In accordance with 40 CFR 264.117 (c), post-closure use may never be allowed to disturb the integrity of the final covers, liners, or any other components of the containment system, or the functions of the facility's monitoring system unless the MDEQ Director finds that either the disturbance is necessary to reduce a threat to human health or the environment, or it is necessary for the proposed use of the property and will not increase the potential hazard to human health or the environment.

Monitoring Activities

The closed Landfill will be monitored by collecting and analyzing samples for a target list of organics that would be representative of the contaminants remaining in the system at closure. The list of parameters was developed by reviewing historical leachate data and recent Appendix IX monitoring data. The leachate collection system and the liner failure detection system will be sampled semi-annually after Landfill closure, unless another sampling program is approved by the Director.

Analysis of the leachate collected from the system will provide data regarding leachate composition. Analysis of the liquid from the leak detection sump will provide confirmation that the primary liner is intact.

Contact Information

As required by 40 CFR 264.118(b)(3) the Responsible Care Leader of the Michigan Operations site is the contact for questions about the unit during the post-closure care period.

Responsible Care Leader
Michigan Operations
1790 Building
Midland, MI 48667
989-636-2646

Plan Amendments

Any amendments made to the post-closure plan will comply with the requirements of 40 CFR 118(d).

Cap Elevation Survey Plan
for
Salzburg Landfill
Rev. 1

Introduction

Dow undertook an investigation in August 2008 to determine if settlement was occurring on previously capped cells at Salzburg Landfill (SLF). The investigation was performed to establish a basis for specifying a time frame for future surveys of capped cells at SLF to ensure settlement was not becoming an issue.

The investigation involved surveying capped Cells #17 through #19 (Cells 17/19) and capped Cells #40 through #43 (Cells 40/43). Both of these cells were capped in 2005. The survey involved determining the current top of cap elevation at approximately 20 points, oriented in 3 cross sections. The survey results were compared to the original design elevations to determine if settlement was occurring.

The data from the August 2008 survey and the original design elevation comparison are shown on attached drawings B2-100-854 (Cells 17/19) and B2-100-853 (Cells 40/43). The average change in elevation for all of points surveyed on each cap is less than 0.1' from the plan elevations. The largest elevation deviation is in a line along the topsoil berm on the east side of Cells 17/19 (see Points 7, 14 & 21 on B2-100-854). The average elevation change for these three points is 0.3 feet. The current cap slope in this area was calculated and found to be very close to the design cap slope as shown in the following table:

<u>SURVEY POINT¹</u>	<u>CURRENT SLOPE BETWEEN POINTS</u>	<u>DESIGN SLOPE</u>
7	0.9%	1%
14	1.2%	1%
21		

These findings indicate that there are no settlement issues on the Cells 17/19 or Cells 40/43 caps. Dow believes this is true for all capped cells at Salzburg Landfill which is supported by these two facts:

1. Ponding has never occurred on any of the caps which are visually inspected after every ½" rainfall; and
2. No caps have experienced sink holes or differential settlement requiring a repair in the past 25 years.

Based on these findings and as required by Condition III.E.4 of the license, Dow proposes the Cap Elevation Survey Plan described below.

¹ These survey point numbers refer only to the 2008 survey. They will be replaced by new point numbers for future surveys.

Cap Elevation Survey Plan

- Determine the current elevation of each survey point shown on attached Drawings B2-200-1374 and B2-201-1374. These drawings are titled NORTH CELLS #1 THRU #19 and SOUTH CELLS #38 THRU #43, respectively.
- The circled number for each survey point shown on these drawings coincides with the SURVEY POINT NUMBER listed on the attached spreadsheets. The new survey data will be entered into the spreadsheet column titled (DATE) SURVEY ELEV (DATE refers to the date of the survey). Macros are included in the spreadsheets that automatically determine changes in elevation (Δ ELEV column) for a specific point or changes in slope (Δ SLOPE column) between adjacent points.
- The changes in elevation and slope will be reviewed by Dow and a report showing all data will be submitted to the Michigan Department of Natural Resources and Environment (MDNRE). The MDNRE and Dow will agree on a path forward for any cap locations where there are indications of significant settlement as described below.
- The periodicity for the post closure surveys on closed cells will be as follows:
 - First survey of all currently capped cells at SLF, Cells #1 thru #19 & Cells #38 thru #43, will be performed in 2010, or the year that currently active Cells 20/22 is capped. The first survey will also include establishing survey points on the Cells 20/22 cap. The survey point locations for Cells 20/22, and all cells capped in the future, will be established and agreed upon prior to starting the cap survey;
 - The data from the first survey of the Cells #1 thru #19 & Cells #38 thru #43 caps will be compared against the original design elevations and slopes for these caps which are indicated in columns labeled "DESIGN ELEVATION" and "DESIGN SLOPE TO PREVIOUS POINT" on the spreadsheets. If the MDNRE and Dow agree the results of the first survey indicate settlement is not an issue, the second survey of all capped cells will be performed 3 years after the first. The majority of cap settlement for Cells 20/22, if any, should occur within this time frame;
 - If the MDNRE and Dow agree the results of the 3-year survey indicate settlement is not an issue, the subsequent survey of all capped cells will be performed 5 years after the second;
 - If the MDNRE and Dow agree the results of the 5-year survey indicate settlement is not an issue, periodic surveys will then be performed every 10 years after that;
 - If, at any time, evidence is found indicating that settlement has become an issue, the periodicity of the surveys may be discussed and agreed upon with the MDNRE.
- Surveys of future cells capped after Cells 20/22:
 - First survey will be the determination of the as-built elevations when the cap is constructed;
 - Second survey will be 3 years after the cap is constructed. The majority of cap settlement, if any, should occur within this time frame; and
 - If the MDNRE and Dow agree the results of the 3-year survey indicate settlement is not an issue, this cap will then be surveyed as part of the next 10-year site survey.
- Indicators that "significant" settlement may have occurred:
 - The elevation of a survey point changes by more than 0.5 feet in elevation between surveys;
 - A 30% flattening of the cap slopes, i.e., a 1% cap slope reduces to a 0.7% slope or a 2% cap slope reduces to a 1.4% slope; or
 - Significant ponding on the caps is noted during the post-rain event inspections.

SALZBURG LANDFILL CAP ELEVATION SURVEY

NORTH CELLS #1 THRU #19

(DATE) SURVEY vs DESIGN TOP OF CAP ELEVATION

SURVEY POINT NUMBERS ¹	EAST COORDINATE	SOUTH COORDINATE	DISTANCE TO PREVIOUS POINT (FEET)	(DATE) SURVEY ELEV (FEET)	DESIGN ELEV ² (FEET)	Δ ELEV ³ (FEET)	DESIGN SLOPE TO PREVIOUS POINT ⁴ (%)	CURRENT SLOPE TO PREVIOUS POINT (%)	Δ SLOPE (%)
1	E.6899	S.7114	N/A		638.1		N/A	N/A	N/A
2	E.6992	S.6982	162		640.0		1.2	N/A	
3	E.7085	S.6928	N/A		638.1		N/A	N/A	N/A
*2	E.6992	S.6982	107		640.0		1.8		
4	E.6826	S.7032	N/A		638.1		N/A	N/A	N/A
5	E.6926	S.6923	148		640.0		1.3		
6	E.6995	S.6847	N/A		638.1		N/A	N/A	N/A
*5	E.6926	S.6923	103		640.0		1.8		
7	E.6742	S.6978	N/A		638.1		N/A	N/A	N/A
8	E.6853	S.6860	162		640.0		1.2		
9	E.6930	S.6773	N/A		638.1		N/A	N/A	N/A
*8	E.6853	S.6860	115		640.0		1.6		
10	E.6712	S.6876	N/A		638.1		N/A	N/A	N/A
11	E.6783	S.6798	106		640.0		1.8		
12	E.6863	S.6711	N/A		638.4		N/A	N/A	N/A
*11	E.6783	S.6798	118		640.0		1.4		
13	E.6643	S.6799	N/A		638.1		N/A	N/A	N/A
14	E.6714	S.6737	94		640.0		2.0		
15	E.6807	S.6657	N/A		639.3		N/A	N/A	N/A
*14	E.6714	S.6737	122		640.0		0.6		
16	E.6749	S.6609	N/A		638.1		N/A	N/A	N/A
*15	E.6807	S.6657	75		639.3		1.6		
17	E.6924	S.6472	N/A		638.1		N/A	N/A	N/A
18	E.6924	S.6550	104		639.0		0.9		
19	E.6924	S.6654	104		640.0		1.0		
20	E.7027	S.6550	N/A		639.0		N/A	N/A	N/A
21	E.7027	S.6650	100		640.0		1.0		
22	E.7098	S.6550	N/A		639.0		N/A	N/A	N/A
23	E.7104	S.6650	100		640.0		1.0		
24	E.7106	S.6715	65		640.6		0.9		
25	E.7104	S.6802	87		640.1		0.6		
26	E.7183	S.6550	N/A		639.0		N/A	N/A	N/A
27	E.7175	S.6650	100		640.0		1.0		
28	E.7174	S.6740	90		640.9		1.0		
29	E.7177	S.6806	65		640.1		1.2		
30	E.7292	S.6550	N/A		639.0		N/A	N/A	N/A
31	E.7292	S.6650	100		640.0		1.0		
32	E.7106	S.6750	100		640.6		0.6		
33	E.7301	S.6850	100		641.4		0.8		
34	E.7381	S.6551	N/A		639.0		N/A	N/A	N/A
35	E.7377	S.6651	100		640.0		1.0		
36	E.7373	S.6751	100		640.9		0.9		
37	E.7369	S.6851	100		642.0		1.1		
38	E.7489	S.6553	N/A		639.0		N/A	N/A	N/A
39	E.7489	S.6653	100		640.0		1.0		
40	E.7489	S.6753	100		641.0		1.0		
41	E.7394	S.6853	100		642.0		1.0		
42	E.7494	S.6953	100		643.0		1.0		
43	E.7494	S.7003	50		644.0		2.0		
44	E.7575	S.6554	N/A		639.0		N/A	N/A	N/A
45	E.7571	S.6654	100		640.0		1.0		
46	E.7566	S.6754	100		641.0		1.0		

NOTES:

1. POINT NUMBERS are shown on Drawings B2-200-1374. Also an * indicates points that are duplicated in the table because the grade slopes away from that point in two directions.
2. DESIGN ELEVATION indicates the original design elevation for the surface of the topsoil layer at that point on the cap.
3. A negative number for Δ ELEV indicates the SURVEY elevation is lower than the PLAN elevation.
A positive number for Δ ELEV indicates the SURVEY elevation is higher than the PLAN elevation.
4. N/A in this column indicates a slope calculation between this point and the previous point is not applicable.

SALZBURG LANDFILL CAP ELEVATION SURVEY

NORTH CELLS #1 THRU #19

(DATE) SURVEY vs DESIGN TOP OF CAP ELEVATION

SURVEY POINT NUMBERS ¹	EAST COORDINATE	SOUTH COORDINATE	DISTANCE TO PREVIOUS POINT (FEET)	(DATE) SURVEY ELEV (FEET)	DESIGN ELEV ² (FEET)	Δ ELEV ³ (FEET)	DESIGN SLOPE TO PREVIOUS POINT ⁴ (%)	CURRENT SLOPE TO PREVIOUS POINT (%)	Δ SLOPE (%)
47	E.7561	S.6854	100		642.0		1.0		
48	E.7556	S.6954	100		643.0		1.0		
49	E.7554	S.7004	50		644.0		2.0		
50	E.7699	S.6600	N/A		639.5		N/A	N/A	N/A
51	E.7699	S.6700	100		640.5		1.0		
52	E.7699	S.6800	100		641.5		1.0		
53	E.7699	S.6900	100		642.5		1.0		
54	E.7699	S.7000	100		643.5		1.0		
55	E.7699	S.7100	100		644.5		1.0		
56	E.7779	S.6600	N/A		639.5		N/A	N/A	N/A
57	E.7775	S.6700	100		640.5		1.0		
58	E.7771	S.6800	100		641.5		1.0		
59	E.7767	S.6900	100		642.5		1.0		
60	E.7763	S.7000	100		643.5		1.0		
61	E.7760	S.7100	100		644.5		1.0		
62	E.7912	S.6600	N/A		639.5		N/A	N/A	N/A
63	E.7912	S.6700	100		640.5		1.0		
64	E.7912	S.6800	100		641.5		1.0		
65	E.7912	S.6900	100		642.5		1.0		
66	E.7912	S.7000	100		643.5		1.0		
67	E.7912	S.7100	100		644.5		1.0		
68	E.8012	S.6600	N/A		639.5		N/A	N/A	N/A
69	E.8012	S.6700	100		640.5		1.0		
70	E.8012	S.6800	100		641.5		1.0		
71	E.8012	S.6900	100		642.5		1.0		
72	E.8012	S.7000	100		643.5		1.0		
73	E.8012	S.7100	100		644.5		1.0		
74	E.8117	S.6600	N/A		639.5		N/A	N/A	N/A
75	E.8116	S.6700	100		640.5		1.0		
76	E.8115	S.6800	100		641.5		1.0		
77	E.8112	S.6900	100		642.5		1.0		
78	E.8109	S.7000	100		643.5		1.0		
79	E.8106	S.7100	100		644.5		1.0		
80	E.6791	S.6999	N/A		638.1		N/A	N/A	N/A
81	E.6885	S.6888	146		640.0		1.3		
82	E.6956	S.6803	N/A		638.1		N/A	N/A	N/A
*81	E.6885	S.6888	110		640.0		1.7		
83	E.6816	S.6538	N/A		638.1		N/A	N/A	N/A
84	E.6861	S.6598	75		639.0		1.2		
85	E.6893	S.6682	91		639.0		0.0		
86	E.7064	S.6550	N/A		639.0		N/A	N/A	N/A
87	E.7064	S.6650	100		640.0		1.0		
88	E.7064	S.6700	50		640.5		1.0		
89	E.7231	S.6550	N/A		639.0		N/A	N/A	N/A
90	E.7231	S.6650	100		640.0		1.0		
91	E.7231	S.6747	97		641.0		1.0		
92	E.7231	S.6809	N/A		640.5		N/A	N/A	N/A
93	E.7435	S.6552	N/A		639.0		N/A	N/A	N/A
94	E.7435	S.6652	100		640.0		1.0		
95	E.7435	S.6752	100		641.0		1.0		
96	E.7435	S.6852	100		642.0		1.0		
97	E.7435	S.6952	100		643.0		1.0		

NOTES:

1. POINT NUMBERS are shown on Drawings B2-200-1374. Also an * indicates points that are duplicated in the table because the grade slopes away from that point in two directions.
2. DESIGN ELEVATION indicates the original design elevation for the surface of the topsoil layer at that point on the cap.
3. A negative number for Δ ELEV indicates the SURVEY elevation is lower than the PLAN elevation.
A positive number for Δ ELEV indicates the SURVEY elevation is higher than the PLAN elevation.
4. N/A in this column indicates a slope calculation between this point and the previous point is not applicable.

SALZBURG LANDFILL CAP ELEVATION SURVEY

NORTH CELLS #1 THRU #19

(DATE) SURVEY vs DESIGN TOP OF CAP ELEVATION

SURVEY POINT NUMBERS ¹	EAST COORDINATE	SOUTH COORDINATE	DISTANCE TO PREVIOUS POINT (FEET)	(DATE) SURVEY ELEV (FEET)	DESIGN ELEV ² (FEET)	Δ ELEV ³ (FEET)	DESIGN SLOPE TO PREVIOUS POINT ⁴ (%)	CURRENT SLOPE TO PREVIOUS POINT (%)	Δ SLOPE (%)
98	E.7631	S.6600	N/A		639.5		N/A	N/A	N/A
99	E.7631	S.6700	100		640.5		1.0		
100	E.7631	S.6800	100		641.5		1.0		
101	E.7631	S.6900	100		642.5		1.0		
102	E.7631	S.7000	100		643.5		1.0		
103	E.7631	S.7097	96		644.5		1.0		
104	E.7842	S.6600	N/A		639.5		N/A	N/A	N/A
105	E.7842	S.6700	100		640.5		1.0		
106	E.7842	S.6800	100		641.5		1.0		
107	E.7842	S.6900	100		642.5		1.0		
108	E.7842	S.7000	100		643.5		1.0		
109	E.7842	S.7100	100		644.5		1.0		

NOTES:

- POINT NUMBERS are shown on Drawings B2-200-1374 & B2-201-1374. Also an * indicates points that are duplicated in the table because the grade slopes away from that point in two directions.
- DESIGN ELEVATION indicates the original design elevation for the surface of the topsoil layer at that point on the cap.
- A negative number for Δ ELEV indicates the SURVEY elevation is lower than the PLAN elevation.
A positive number for Δ ELEV indicates the SURVEY elevation is higher than the PLAN elevation.
- N/A in this column indicates a slope calculation between this point and the previous point is not applicable.

SALZBURG LANDFILL CAP ELEVATION SURVEY

SOUTH CELLS #38 THRU #43

(DATE) SURVEY vs DESIGN ELEVATION

SURVEY POINT NUMBER ¹	EAST COORDINATE	SOUTH COORDINATE	DISTANCE TO PREVIOUS POINT (FEET)	(DATE) SURVEY ELEV (FEET)	DESIGN ELEV ² (FEET)	Δ ELEV ³ (FEET)	DESIGN SLOPE TO PREVIOUS POINT ⁴ (%)	CURRENT SLOPE TO PREVIOUS POINT (%)	Δ SLOPE (%)
1	E.7736	S.7964	N/A		636.1		N/A	N/A	N/A
2	E.7875	S.7823	191		638.0		1.0		
3	E.8015	S.7680	200		640.0		1.0		
4	E.8085	S.7609	100		642.0		2.0		
5	E.8156	S.7538	100		644.0		2.0		
6	E.8229	S.7470	100		646.0		2.0		
7	E.7833	S.7992	N/A		636.5		N/A	N/A	N/A
8	E.7936	S.7879	153		638.0		1.0		
9	E.8070	S.7731	200		640.0		1.0		
10	E.8138	S.7657	100		642.0		2.0		
11	E.8202	S.7581	100		644.0		2.0		
12	E.8264	S.7502	100		646.0		2.0		
13	E.7901	S.8112	N/A		636.1		N/A	N/A	N/A
14	E.8034	S.7968	195		638.0		1.0		
15	E.8167	S.7818	200		640.0		1.0		
16	E.8236	S.7747	100		642.0		2.0		
17	E.8306	S.7675	100		644.0		2.0		
18	E.8365	S.7618	82		645.6		1.9		
19	E.7968	S.8172	N/A		636.1		N/A	N/A	N/A
20	E.8100	S.8028	196		638.0		1.0		
21	E.8234	S.7880	200		640.0		1.0		
22	E.8302	S.7806	100		642.0		2.0		
23	E.8370	S.7733	100		644.0		2.0		
24	E.8410	S.7688	60		645.2		2.0		
25	E.8045	S.8243	N/A		636.1		N/A	N/A	N/A
26	E.8177	S.8098	196		638.0		1.0		
27	E.8311	S.7950	200		640.0		1.0		
28	E.8378	S.7876	100		642.0		2.0		
29	E.8467	S.7779	131		644.6		2.0		
30	E.8127	S.8318	N/A		636.1		N/A	N/A	N/A
31	E.8253	S.8167	197		638.0		1.0		
32	E.8381	S.8013	200		640.0		1.0		
33	E.8443	S.7934	100		642.0		2.0		
34	E.8513	S.7852	108		644.0		1.8		
35	E.8729	S.7563	N/A		642.0		N/A	N/A	N/A
36	E.8529	S.7563	200		644.0		1.0		
37	E.8429	S.7559	100		645.0		2.0		
38	E.8729	S.7634	N/A		642.0		N/A	N/A	N/A
39	E.8529	S.7634	200		644.0		1.0		
40	E.8429	S.7634	100		645.0		1.0		
41	E.8629	S.7732	N/A		643.0		N/A	N/A	N/A
42	E.8529	S.7732	100		644.0		1.0		
43	E.8437	S.7732	92		644.9		1.0		
44	E.7882	S.8028	N/A		636.5		N/A	N/A	N/A
45	E.7982	S.7921	147		638.0		1.0		
46	E.8118	S.7774	200		640.0		1.0		
47	E.8186	S.7701	100		642.0		2.0		
48	E.8254	S.7627	100		644.0		2.0		
49	E.8323	S.7551	103		646.1		2.0		

NOTES:

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