



CEDAR CITY

10 NORTH MAIN • CEDAR CITY, UTAH 84720
435-586-2950 • FAX: 435-586-4362
www.cedarcity.org

Mayor
Joe Burgess

Council Members
Ronald R. Adams
Nina R. Barnes
Georgia Beth Thompson
John R. Westwood
Steve Wood

City Manager
Ronald F. Chandler

January 9, 2012

SW126
RECEIVED
JAN 11 2012
UTAH DIVISION OF
SOLID & HAZARDOUS WASTE
2012.00054

Mr. Scott Anderson, Director
State of Utah Department of Environmental Quality
Division of Solid and Hazardous Waste
288 North 1460 West
P.O. Box 144880
Salt Lake City, Utah 84114-4880

SUBJECT: CEDAR CITY CLASS IVb LANDFILL RENEWAL APPLICATION

Dear Mr. Downs:

Please find enclosed for your review our renewal application for the Cedar City Class IVb Landfill (Bulloch Pit).

If you have any questions regarding this renewal application, please feel free to contact me at (435) 865-5119.

Sincerely,

Kit Wareham, P.E.
City Engineer

RECEIVED

JAN 11 2012

Utah Class IV and VI Landfill Permit Application Form

UTAH DIVISION OF

SOLID & HAZARDOUS WASTE

2012-00051

Part I General Information APPLICANT: PLEASE COMPLETE ALL SECTIONS.

I. Landfill Type	<input type="checkbox"/> Class IVa	<input checked="" type="checkbox"/> Class IVb	II. Application Type	<input type="checkbox"/> New Application	<input type="checkbox"/> Facility Expansion
	<input type="checkbox"/> Class VI			<input checked="" type="checkbox"/> Renewal Application	<input type="checkbox"/> Modification

For Renewal Applications, Facility Expansion Applications and Modifications Enter Current Permit Number _____

III. Facility Name and Location

Legal Name of Facility Cedar City Bulloch Pit					
Site Address (street or directions to site) 1050 North Lund Highway				County Iron	
City Cedar City		Zip Code 84720		Telephone (435) 586-2912	
Township 36S	Range 11W	Section(s) 4 & 5	Quarter/Quarter Section 4- SE 5- SW		Quarter Section 4-SE 5-SW
Main Gate Latitude degrees 37 minutes 41 seconds 44			Longitude degrees 113 minutes 06 seconds 38		

IV. Facility Owner(s) information

Legal Name of Facility Owner Cedar City Corporation				
Address (mailing) 10 North Main Street				
City Cedar City		State UT	Zip Code 84720	Telephone (435) 586-2950

V. Facility Operator(s) Information

Legal Name of Facility Operator Cedar City Public Works				
Address (mailing) 10 North Main Street				
City Cedar City		State UT	Zip Code 84720	Telephone (435) 586-2912

VI. Property Owner(s) Information

Legal Name of Property Owner Cedar City Corporation				
Address (mailing) 10 North Main Street				
City Cedar City		State UT	Zip Code 84720	Telephone (435) 586-2950

VII. Contact Information

Owner Contact Rick Holman		Title Cedar City Public Works Director		
Address (mailing) 10 North Main Street				
City Cedar City		State UT	Zip Code 84720	Telephone (435) 586-2912
Email Address hrick@cedarcity.org			Alternative Telephone (cell or other) (435) 233-0057	
Operator Contact Same as Owner Contact		Title		
Address (mailing)				
City		State	Zip Code	Telephone
Email Address			Alternative Telephone (cell or other)	
Property Owner Contact Same as Owner Contact		Title		
Address (mailing)				
City		State	Zip Code	Telephone
Email Address			Alternative Telephone (cell or other)	

Utah Class IV and VI Landfill Permit Application Form

Part I: General Information (Continued)																																									
VIII. Waste Types (check all that apply) <input type="checkbox"/> Landfill will accept all wastes allowed in Class IV or VI landfills Or landfill will accept only the following wastes <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Waste Type</td> <td style="width: 33%;">Combined Disposal Unit</td> <td style="width: 33%;">Monofill Unit</td> </tr> <tr> <td><input checked="" type="checkbox"/> Construction & Demolition</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/> Tires</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/> Yard Waste</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Animals</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input checked="" type="checkbox"/> Contaminated Soil</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Other _____</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> <p><small>Note: Disposal of dead animals must be approved by the Executive Secretary</small></p>	Waste Type	Combined Disposal Unit	Monofill Unit	<input checked="" type="checkbox"/> Construction & Demolition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Tires	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yard Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Animals	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Contaminated Soil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Other _____	<input type="checkbox"/>	<input type="checkbox"/>	IX. Facility Area <table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">Facility Area.....</td> <td style="width: 10%; text-align: center;">34</td> <td style="width: 20%;">acres</td> </tr> <tr> <td>Disposal Area.....</td> <td style="text-align: center;">11.23</td> <td>acres</td> </tr> <tr> <td>Design Capacity</td> <td></td> <td></td> </tr> <tr> <td> Years.....</td> <td style="text-align: center;">12</td> <td></td> </tr> <tr> <td> Cubic Yards.....</td> <td style="text-align: center;">257,996</td> <td></td> </tr> <tr> <td> Tons.....</td> <td style="text-align: center;">128,998</td> <td></td> </tr> </table>		Facility Area.....	34	acres	Disposal Area.....	11.23	acres	Design Capacity			Years.....	12		Cubic Yards.....	257,996		Tons.....	128,998	
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I HEREBY CERTIFY THAT THIS INFORMATION AND ALL ATTACHED PAGES ARE CORRECT AND COMPLETE.																																									
Signature of Authorized Owner Representative _____ Rick Holman Name typed or printed	Title Public Works Director	Date																																							
Address	Address																																								
Signature of Authorized Land Owner Representative (if applicable) _____ Rick Holman Name typed or printed	Title Public Works Director	Date																																							
Address	Address																																								
Signature of Authorized Operator Representative (if applicable) _____ Rick Holman Name typed or printed	Title Public Works Director	Date																																							
Address	Address																																								

**BULLOCH PIT
CLASS IVb
LANDFILL PERMIT RENEWAL APPLICATION**

Permit No. 9611

Prepared by:
Cedar City Corporation
Engineering Department
10 North Main
Cedar City, UT 84721
(435)586-2963

Table of Contents

1.	Part I – General Data	3
2.	Part II – General Report	6
3.	Part III – Technical Data	17
4.	Appendix	
	a. Closure Cost Estimate	
	b. Cell Volume Estimate	
	c. U.S. Geological Survey Topographical Map	
	d. Landfill Cell Plan and Topographical Map	
	e. Landfill Closure Details	

PART I
GENERAL DATA

PART I – GENERAL DATA

1. Name of Facility: Bulloch Pit
2. Site Location: Approximately 1200 North Lund Highway
3. Facility Owner: Cedar City Corporation
4. Facility Operator: Cedar City Public Works
5. Contact Person: Rick Holman
Address: 10 North Main Street
Cedar City, Utah 84720
- Telephone: (435) 586-2912
6. Type of Facility:
- Non- Commercial Initial Application
- Commercial Permit renewal
Original Permit No. 9611
7. Property Ownership
- Presently Owned by applicant
- To be purchased by applicant
- To be leased by applicant
8. Certification of Submitted information.

Kit Wareham
(Name of Official)

City Engineer
(Title)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

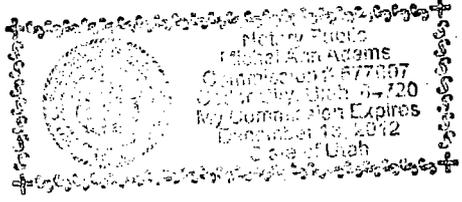
Signature: [Handwritten Signature] Date: 1/9/2012

SUBSCRIBED AND SWORN to before, this 9th day of January, 2005. 11

My commission expires on the 13th day of December, 2012

Michael Ann Adams

(SEAL) Iron County, Utah.



Part II

General Report

PART II – GENERAL REPORT

1. GENERAL DESCRIPTION

The following is a general description of the Class IVb facility, including the types of wastes to be received, handled and the area served by the facility.

Cedar City operates the Class IVb facility for the use of the Cedar City municipal maintenance crews and other governmental agencies as approved. The facility will be open five days per week and is expected to accept less than 210 tons per week.

The City presently owns 34 acres, which have been zoned Industrial for the use as a landfill west of the Cedar City Regional Airport at the approximate address of 1050 North Lund Highway. This location, known as the Bulloch Pit, is the Class IVb facility. The active facility is located within the confines of an old gravel pit with 15 to 20 foot sloping vertical walls. The entire property is fenced and one gated access road leads to the landfill from the northwest area of the property. This entrance is used for access to the Class IVb facility.

The types of wastes accepted at this facility include construction/demolition waste, yard waste and inert waste.

The responsible party for overseeing the operation of the facility is Cedar City Corporation. The facility will have a staff consisting of one equipment operator who reports to the City's Public Works Director. The entire operation is overseen by the City Manager who reports to the City Council.

2. RELATIONSHIP TO THE SOLID WASTE MANAGEMENT PLAN

Iron County has implemented a Solid Waste Management Plan, which began in 1992. Currently a large abandoned open pit mine approximately 12 miles northwest of the City is used for all of Iron County solid waste disposal.

The former gravel pit known as the Bulloch Pit was converted to a Class IVb facility for governmental Class IVb waste to provide fill for the large depression as part of the closure of this pit. This local facility enables the governmental entities using the facility to reduce the distances traveled to haul Class IVb waste an additional 20 miles round-trip per load. Also, reduction of waste volumes at the Iron County Landfill will be achieved through use of this facility.

3. LEGAL DESCRIPTION

Commencing at the SE corner of the SW 1/4, SW 1/4, Section 4, T36S, R11W, SLM; thence West, 2640 feet, North 542 feet; thence East 655 feet; thence North 322.5 feet; thence East, 917 feet; thence North 39°58'16" East, 224 feet; thence North 1594.60 feet; thence East 924 feet; thence south 2640 feet to the point of beginning. Also, Commencing 874.5 feet North, 1068.2 feet West from the SE corner of the W 1/2, SW 1/4, of Section 4, T36S, R11W, SLM; thence West 842 feet; thence North, 385.5 feet; thence West 697 feet; thence North, 505.5 feet; thence East 1683 feet' thence South 720.6 feet; thence South 39°58'16" West, 224 feet to the point of beginning. Also see "Iron County Plats" for ownership proof Front gate is located at Latitude 37,41'45" N, Longitude 113°06'42" West.

4. PLAN OF OPERATION

Copies of this plan of operation will be kept on file at the Cedar City Engineer's office located at 10 North Main, Cedar City, Utah.

A. Schedule of Construction

The Class IVb facility is constructed in the abandoned gravel pit known as the Bulloch Pit. No additional work will be needed to improve the access road into the pit, storm water improvements and cell preparation.

No new infrastructure will need to be constructed. The facility will use the existing access road and the property is fenced and gated. The bottom of the pit will be properly graded to allow easy access and to prevent ponding of storm water prior to use. The Class IVb landfill is now open and operating subject to a permit renewal being granted by UDEQ.

B. Solid Waste Handling Procedures

The facility is open Monday through Friday from 8:00 a.m. until 5:00 p.m. and closed when weather impedes access to the facility and makes operations difficult.

Equipment to operate the facility is made available through the City's Public Works Department. A front-end loader will be available each day the facility is open. A dozer is available as needed to place cover soil. A water truck is also available to control fugitive dust generated from roads, landfill operations and the covering of the waste.

The facility will accept construction/demolition waste, yard waste and inert waste for land filling. The following is a description of on-site solid waste handling procedures:

- 1) The landfill operator will meet all incoming vehicles at the gate. A description of the load will be recorded in the Daily Log along with weights or volumes. (see attached copy of Daily Operating Record).
- 2) All materials brought into the site will be placed in the designated area. Soil and other materials suitable for use as cover or fill material may be stockpiled.
- 3) After disposal, waste will be spread, covered and compacted as needed.

C. Contingency Plans in the Event of Fire

In the event of fire, two fire extinguishers will be kept at the site; one in the front-end loader and one in the operator's truck. If the fire cannot be extinguished or smothered with dirt, the operator will call the fire department or radio for help. The landfill operator will immediately notify the Public Works Director's office of the situation.

The operator will evacuate the landfill, but will not leave the vicinity except where safety is a factor or if directed to by the fire department. The fire chief will be made aware of the type of waste that is on fire and any hazard that may be encountered.

The Public Works Director, the City Manager and the UDEQ must be notified immediately. A written report will be submitted to the UDEQ within 14 days of the event.

Emergency Phone Numbers

Emergency Fire and Rescue	911
Cedar City Fire Department	586-2964
Cedar City Police Department	586-2955
Iron County Sheriff Department	867-7500
Utah Highway Patrol	586-2786
Valley View Medical Center	868-5000
Department of Environmental Quality	(801)538-6170
Iron County Health Department	586-2437

D. Alternative Waste Handling and Disposal

During periods when the facility is not able to accept and dispose of waste (in case of equipment breakdown or other unforeseen events), Class IVb waste materials can be stockpiled on site. If required by regulation, waste can be transported to the Iron County Landfill.

E. Procedure for Excluding Prohibited Waste and PCB's

The Cedar City Bulloch Pit Class IVb facility can only accept for landfilling, construction/demolition waste, yard waste and inert waste. Wastes will only be accepted when an operator is on duty. The landfill operator will meet all vehicles at the gates and each load will be visually inspected. The facility is fenced and locked to deny access whenever the operator is not there.

Should non-hazardous prohibited wastes, or other unacceptable wastes for landfilling at a Class IV facility (such as household garbage) be encountered in a vehicle load, the vehicles will be directed to transport the waste to the Iron County Class I Landfill. If the operator feels that the load contains hazardous waste of PCB's, he will notify the proper authorities (Cedar City Police Department, County Health Department, UDEQ and Sheriff's Department). The operator will make a notation in the logbook of all loads turned away and the reason for not accepting the load. The operator will also notify the City Manager.

If hazardous wastes or wastes containing PCB's are discovered to have been inadvertently accepted the following procedure will be implemented:

- 1) Access to the area will be restricted.
- 2) The situation will be carefully assessed. The police department will be called if unstable wastes that cannot be handled safely or radioactive wastes are discovered or suspected. Proper notifications will be made if any hazardous wastes are discovered.
- 3) If waste can be safely moved, the equipment operator will transport it to a secure zone.
- 4) The Public Works Director will be contacted for further disposition of the waste.
- 5) A record will be made of the discovery, handling and disposition of any hazardous wastes, including notification of the authorities. A copy of this record will be sent to the UDEQ within 14 days of the incident.

5. INSPECTIONS AND RECORDKEEPING

A. Inspections

Routine inspections will be preformed weekly and quarterly as described below to insure the integrity of the facility and prevent malfunctions, operator error and discharges of waste to the environment.

- 1) The landfill operator will conduct a weekly walk-through of the facility and document conditions of the following:
 - a) fences and gates
 - b) access roads

- c) run-off control system
- d) litter and weed control
- e) waste piles/depressions
- f) directional signs

The inspection form will be signed and dated by the operator and will detail observations and the date of any repairs or corrective action.

- 2) The Public Works Director or designee will perform a complete quarterly inspection. Any necessary corrective actions will be placed in writing and given to the operator to correct.

A sample form for these inspections is attached.

B. Record Location

The daily log and inspection forms will be maintained at the office of the Public Works Director located at 716 North Airport Road in Cedar City, Utah.

6. TRAINING AND SAFETY PLAN

A. Operator Training

Each operator/employee of the landfill will be provided with adequate training to comply with the approved "plan of operation" and the "permit". Refresher training will be provided as needed to ensure compliance within the approved plan and permit. Certificates of completion will be kept on file with personnel records.

All employees and managers of the landfill must read these documents prior to beginning work at the facility.

7. FINANCIAL ASSURANCE PLAN

A. Cost Estimates for Closure

Cost estimates for closure are based on the Cedar City Street Department performing closure operations. Total closure costs include in-house engineering and construction totals of \$3,598.00 and \$35,984.00 respectively. Each of these totals includes a 10% contingency. Adding to the subtotals of these two figures a 25% legal fee, the total closure costs are estimated at \$49,478.00.

Estimated Closure Costs

Construction Total	\$34,271.00
Engineering Total	<u>\$ 3,427.00</u>
Subtotal	\$37,698.00
25% Legal Fee	\$9,424.00
Closure Total	<u>\$47,122.00</u>

B. Post-Closure Cost Estimates

The post-closure cost estimates cover the 10-year post-closure period and include site inspections, record keeping, and any correctional maintenance work required. The post-closure cost total is estimated at \$2,356.00, which includes a 10% contingency.

Total estimated Financial Assurance costs are \$49,478.00 (closure plus post-closure costs). Estimated closure cost calculations are shown on the spreadsheet included in the Appendix.

C. Financial Assurance Mechanism

Cedar City Corporation as the owner/operator of the Bulloch Pit Class IVb Landfill has established an account with the Utah Public Treasurer's Investment Fund (PTIF). The current amount in this account is \$49,478.00.

Current total cost estimates are \$49,478.00 for the closure and post-closure care.

8. CLOSURE PLAN

A. Closure Schedule and Landfill Capacity

Each fill area will be covered and closed as soon as it has been filled to the finish elevation. As the area is filled, the ground will be graded and contoured until a cover with a 2% slope is provided with adjacent or imported earth material. Cover material is available from the land immediately east of the pit, which is owned by Cedar City Corporation. The final soil cover will be seeded with a BLM native range mix. The final cover of soil will be two feet thick and will be contoured so that storm water will run-off and away from the landfill.

B. Capacity of Site

The landfill has a current volume of 257,996 cubic yards. Using a compaction rate of 1000 pounds per cubic yard, the tonnage capacity would be 128,998 tons. Estimated volume calculations are shown on the spreadsheet included in the Appendix.

C. Final Inspection

In accordance with UAC R315-302-3(5)(a) and (b) the owner and operator will notify the Executive Secretary of the intent to implement the closure plan in whole or part, 60 days prior to the projected final receipt of waste at the facility. Procedures for final closure will commence within 30 days after receipt of the final volume of waste and will be completed within 180 days from the starting date.

Under current regulations when the facility closure is completed, closure plan sheets representing as-built changes to final construction of the closure are required to be presented to the Executive Secretary. A professional engineer registered in the State of Utah will sign these sheets. Along with the closure plan sheets, certification of the closure of the facility by the owner and a professional engineer are also required for the Executive Secretary.

This section should be reviewed and existing regulations incorporated when permits are updated every 5 years.

D. Record of Title, Land Use and Zoning restrictions

The closed landfill will be re-zoned, if necessary, to conform to local regulations after closure. A description of the landfill history and filled areas will be permanently appended to the record of title no later than 60 days after certification of closure. Land use restrictions will be assigned that conform to existing regulations for closed landfills at the date of closure. Currently, the facility lies within the Airport Protection Zone of the Cedar City Regional Airport and following closure the land will remain an industrial land-use and zoning designation to maintain the protection zone.

9. POST-CLOSURE PLAN

A Post-closure care period will be in place for 10 years or as long as the Executive Secretary determines is required for the facility to become stabilized and to protect human health and the environment. When post-closure is complete as determined by the Executive Secretary, Cedar City Corporation will submit

engineer registered in the State of Utah stating why post-closure activities are no longer necessary.

Post-closure care will consist of semi-annual inspections in June and November of each year to insure cover integrity, identification of drainage-related problems and inspection of fencing and facility security.

Cedar City Public Works will be the point of contact during the post-closure period. The address and phone number is: 716 North Airport Road, Cedar City, Utah 84720 – (435)586-2912.

DAILY OPERATING RECORD

DATE: _____

Vehicle	Volume Dumped	Type of Waste
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		

Total Number of Vehicles: _____

Total Volume Dumped: _____

Comments: _____

Operator Signature: _____

CEDAR CITY CLASS IV LANDFILL
BULLOCH PIT
INSPECTION FORM

Monthly_____

Date:_____

I. Road and structures

		<u>Condition</u>	
		Satisfactory	Need Repair*
1.	Access Roads	_____	_____
2.	Gates	_____	_____
3.	Fences	_____	_____
4.	Run-off Control System	_____	_____
5.	Directional Signs	_____	_____

II. Operations

1.	Litter and weed control	_____	_____
2.	Waste Piles/depressions	_____	_____
3.	Final Cover	_____	_____

*Specify recommended repairs and list action taken: _____

III. Other Observations: _____

Name of Inspector_____

Signature_____

Part III
Technical Data

PART III – TECHNICAL DATA

1. SITE VICINITY MAP

An original of the most recent full size U.S. Geological Survey topographic map, 7-1/2 minute series is attached. The map shows the facility boundary, the property boundary, the latitude and longitude coordinates of the front gate, the land use and zoning of the surrounding area, existing utilities and structures within one-fourth mile of the site, surface drainage channels and the direction of the prevailing winds.

2. LAND-FILL USE MAP

A topographic map of the proposed landfill is also attached, which is drawn to a scale of 300 feet to the inch, containing two-foot contour intervals. The map indicates landfill boundaries, the location of run-on and run-off control systems and borrow and fill areas.

3. CELL DESIGN AND RUN-OFF CONTROL

A drawing entitled "Typical Sections" is attached which is signed and sealed by a professional engineer registered in the State of Utah. This drawing details typical landfill cross-sections and a typical ditch and berm sections to be constructed around the landfill to prevent run-on. Run-off control will be by way of leaving the final compacted and seeded cover following closure of the area at an elevation no lower than the existing grade surrounding the landfill and sloping at a 2% grade into the unused area of the landfill.

4. ENGINEERING REPORT

A Facility Design, Operation, Cover Sources and Equipment

The landfill facility required minimal preparation in access road improvement and leveling of the pit base prior to acceptance of wastes. A 935 Caterpillar Loader is mainly used in daily operation of the facility. However, a dozer and grader are available on an as needed basis from the Cedar City Street Department.

Cover source for each fill area will be from City owned property directly east of the proposed facility.

B. Fugitive Dust Control

The waste material deposited in the facility will be spread out, covered and compacted as needed to prevent fugitive dust emissions. A water

truck is available as needed from the City Street Department, which will be used to lightly moisten the ground and cover materials.

C. Run-on/Run-off Control

No run-off from the facility will be allowed. All leach from the landfill will be contoured in the pit and allowed to percolate into the gravel soil. Only inert waste will be allowed into the Class IV facility and no danger of ground contamination is anticipated.

Run-on to the Class IV Bulloch Pit facility will be eliminated through the use of berms and ditches, which will route the run-on around the landfill and ultimately to the Iron County drainage and flood system, or allow the run-on to percolate into the gravel soil before entering an active area of the landfill.

D. Facility Closure, Construction, Maintenance and Land Use

The closure of the landfill will be constructed as shown on the Typical Design drawing referred to in Section 3 of Part III. When any area of the landfill is filled to the final elevation, construction for closure will begin.

Further details of closure design, construction and maintenance are discussed previously in Part II.

Land use after closure will not be permitted. The facility lies in the Airport Protection Zone of the Cedar City Regional Airport. This City owned property will remain in an industrial land-use and zoning designation following closure to maintain the protection of the airport.

APPENDIX

**BULLOCH PIT
CLOSURE ESTIMATES
2012**

CELL	AREA FT^2	FINAL COVER \$/YD^3	RESEEDING \$/ACRE	SEMI ANNUAL INSP./ADMIN. 3.5%	TOTAL CELL CLOSURE COST	POST CLOSURE COST 6.25%
1	18,094	\$1,340	\$7	\$47	\$1,395	\$87
2	19,883	\$1,473	\$8	\$52	\$1,532	\$96
3	11,393	\$844	\$4	\$30	\$878	\$55
4	10,000	\$741	\$4	\$26	\$771	\$48
5	15,399	\$1,141	\$6	\$40	\$1,187	\$74
6	10,093	\$748	\$4	\$26	\$778	\$49
7	9,971	\$739	\$4	\$26	\$769	\$48
8	12,292	\$911	\$5	\$32	\$947	\$59
9	13,022	\$965	\$5	\$34	\$1,004	\$63
10	10,206	\$756	\$4	\$27	\$787	\$49
11	11,866	\$879	\$5	\$31	\$914	\$57
12	14,601	\$1,082	\$6	\$38	\$1,125	\$70
13	14,040	\$1,040	\$5	\$37	\$1,082	\$68
14	18,543	\$1,374	\$7	\$48	\$1,429	\$89
15	17,666	\$1,309	\$7	\$46	\$1,362	\$85
16	10,000	\$741	\$4	\$26	\$771	\$48
17	10,000	\$741	\$4	\$26	\$771	\$48
18	10,000	\$741	\$4	\$26	\$771	\$48
19	10,000	\$741	\$4	\$26	\$771	\$48
20	10,000	\$741	\$4	\$26	\$771	\$48
21	10,000	\$741	\$4	\$26	\$771	\$48
22	10,000	\$741	\$4	\$26	\$771	\$48
23	10,000	\$741	\$4	\$26	\$771	\$48
24	10,000	\$741	\$4	\$26	\$771	\$48
25	10,000	\$741	\$4	\$26	\$771	\$48
26	10,827	\$802	\$4	\$28	\$834	\$52
27	15,303	\$1,134	\$6	\$40	\$1,179	\$74
28	10,000	\$741	\$4	\$26	\$771	\$48
29	10,000	\$741	\$4	\$26	\$771	\$48
30	10,000	\$741	\$4	\$26	\$771	\$48
31	10,000	\$741	\$4	\$26	\$771	\$48
32	10,000	\$741	\$4	\$26	\$771	\$48
33	10,000	\$741	\$4	\$26	\$771	\$48
34	10,000	\$741	\$4	\$26	\$771	\$48
35	10,000	\$741	\$4	\$26	\$771	\$48
36	10,083	\$747	\$4	\$26	\$777	\$49
37	13,274	\$983	\$5	\$35	\$1,023	\$64
38	10,000	\$741	\$4	\$26	\$771	\$48
39	10,000	\$741	\$4	\$26	\$771	\$48
40	12,591	\$933	\$5	\$33	\$970	\$61
41	10,000	\$741	\$4	\$26	\$771	\$48
42	10,000	\$741	\$4	\$26	\$771	\$48
TOTAL	\$489,147	\$36,233	\$191	\$1,275	\$37,699	\$2,356

*All unit costs include a 10% contingency

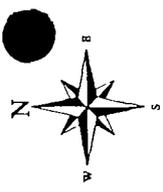
** All fill costs assume cover material provided from disposed material

*** Inspection and Engineering Performed by City Engineering Staff

**CEDAR CITY BULLOCH PIT
CELL VOLUMES
2012**

CELL	AREA (FT^2)	TOTAL VOLUME (YD^3)	USED VOLUME (YD^3)	REMAINING VOLUME (YD^3)
1	18094	6852	0	6852
2	19883	9260	0	9260
3	11393	4260	0	4260
4	10000	8334	0	8334
5	15399	8334	0	8334
6	10093	3519	0	3519
7	9971	3519	0	3519
8	12292	5370	0	5370
9	13022	7963	0	7963
10	10206	6481	0	6481
11	11866	6296	0	6296
12	14601	5185	0	5185
13	14040	5000	0	5000
14	18543	5741	5167	574
15	17666	10926	0	10926
16	10000	9074	0	9074
17	10000	9074	0	9074
18	10000	8889	0	8889
19	10000	7963	0	7963
20	10000	9074	0	9074
21	10000	10741	0	10741
22	10000	10556	3167	7389
23	10000	10000	9000	1000
24	10000	9630	8186	1445
25	10000	9815	8834	982
26	10827	7037	6333	704
27	15303	10370	0	10370
28	10000	10000	0	10000
29	10000	10000	0	10000
30	10000	9815	0	9815
31	10000	10000	0	10000
32	10000	7953	3977	3977
33	10000	7953	7158	795
34	10000	7953	6362	1591
35	10000	7953	7953	0
36	10083	6481	6481	0
37	13274	9630	0	9630
38	10000	10556	0	10556
39	10000	10185	0	10185
40	12591	10370	5185	5185
41	10000	7778	3889	3889
42	10000	7593	3797	3797
TOTALS	489147	343483	85487	257996

BULLOCH PIT APPLICATION DWG



SCALE: 1"=300'

EXISTING IRRIGATION DITCH

CEADAR CITY REGIONAL AIRPORT

RUNWAY

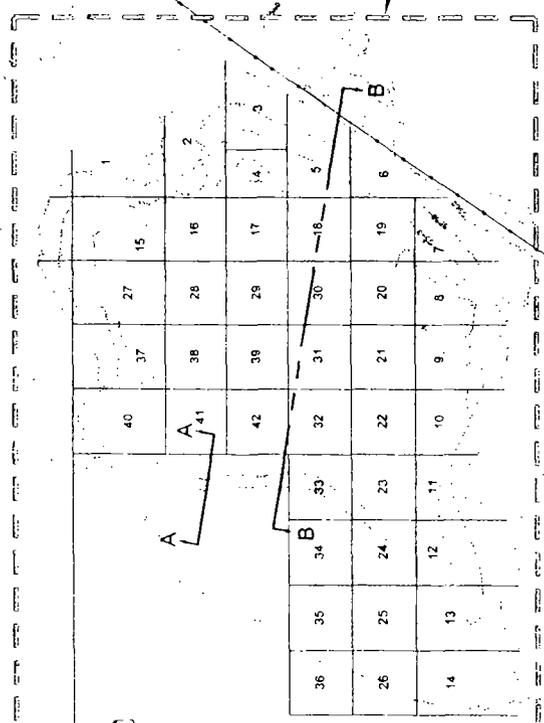
TAXIWAY

PERMITTED CLASS 4 LAND FILL AREA

PLAN VIEW

SCALE: 1"=300'

LUND HIGHWAY

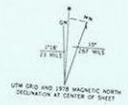


PROPERTY BOUNDARIES (EXCEPT RAILROADS)
 STREETS
 RAILROADS
 LIGHT INDUSTRIAL
 AGRICULTURAL

FRONT GATE
 CENTERLINE 52° 41' 45" N
 CENTERLINE 113° 04' 42" W



1:24,000
 1:50,000 FEET
 Mapped, edited, and published by the Geological Survey
 Control by USGS, NOS/NOAA and State of Utah
 Topography from aerial photographs by multisite methods
 and by plane-table surveys 1950
 Aerial photographs taken 1949
 Polyconic projection. 1927 North American datum
 10,000-foot grid based on Utah coordinate system,
 south zone
 1000-meter Universal Transverse Mercator grid ticks,
 zone 12, shown in blue
 Red line indicates area in which only
 landmark buildings are shown
 Dashed land lines indicate approximate location
 Purple line indicates extension of urban areas



CONTOUR INTERVAL 40 FEET
 DOTTED LINE REPRESENTS 10 FOOT CONTOURS
 NATIONAL GEODESIC DATUM OF 1929
 THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
 FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION
 Heavy-duty ——— SLASHED LINES Light-duty
 Medium-duty ——— SLASHED LINES Unimproved
 U.S. Route State Route Interstate Route



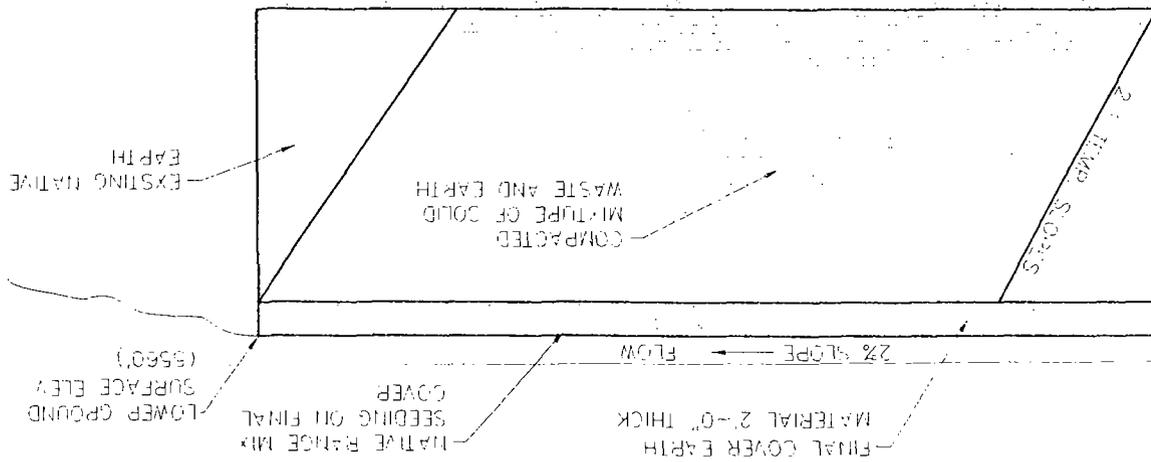
Revisions shown in purple compiled from aerial photographs
 taken 1976 and other source data. This information not
 field checked. Map dated 1978

CEDAR CITY, UTAH
 N73735-W113007.5
 1950
 PHOTOENGRAVED 1978
 DATA FROM THE SERIES 1947

III TYPICAL SECTIONS

SECTION A-A TYPICAL LANDFILL SECTION

N.T.S.



SECTION B-B LANDFILL TYPICAL DITCH SECTION

N.T.S.

