

	<p>Standard Operating Procedure</p> <p>Berm Construction/Upgrade to Meet SPCC Plan</p>	<p>Status <u>Final</u></p> <p>Revision <u>0</u></p>
<p>MCABU / SJB</p>		<p><u>Page 1</u></p>

SCOPE	This procedure documents the steps required to expand/ upgrade / repair existing berms to meet the requirement of the SPCC plan.
REQUIREMENTS	Tasks to be performed by those with knowledge of the MCA Safe Work Practices and Excavation Standard. All personnel performing work will be trained and competent for their respective job responsibilities and have field construction knowledge.
MATERIALS & EQUIPMENT	Dirt material (road base), backhoe, transit (for leveling), compactor, and fresh water trailer.
APPLICABLE DOCUMENTS	MCA Design Standards & Expectations for Construction, San Juan SPCC plan, and site plot plans.
SAFETY	Follow current guidance on all required MSW documentation PTW/JSA and Excavation Standard. Review and ensure they are understood by the affected workers.
QUALITY	This procedure shall be reviewed on a three year basis.

<i>TASK</i>	<i>SUB-TASK</i>
<p>1.0 Job pre-work</p>	<ol style="list-style-type: none"> 1. Confirm tank(s) size. 2. Ensure that berm design is for a minimum of 1.5 times the largest tank, plus 2” rainfall and 2” freeboard. 3. Coordinate to have materials and appropriate contractors on location prior to job, especially dirt material.
<p>2.0 Pre-job meeting</p>	<ol style="list-style-type: none"> 1. Pre-job Reviews: JSA, Procedures, Hazard ID, etc. 2. Review berm design for location and ensure sizing and compatibility with existing site layout.
<p>3.0 Remove fencing (if needed)</p>	<ol style="list-style-type: none"> 1. Remove any fencing that blocks access to the berm.
<p>4.0 Remove one side of existing berm (if sizing is currently too small)</p>	<ol style="list-style-type: none"> 1. Use backhoe to push down one side of berm wall and collect material in a spoils pile.

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<p>MCABU / SJB</p>		<p><u>Page 2</u></p>

<p>5.0 Construct ‘new’ berm walls to design size and compact</p>	<ol style="list-style-type: none"> 1. Use backhoe to scar underlying native soil (to create good interface with berm material). 2. Use spoils pile and new road base to lay out 12” lift of material in proper berm dimension. 3. Wet material as needed with fresh water. 4. Use compactor and make pass over material to achieve compaction (repeat as needed). 5. Continue steps 2-4 until the designed berm height (top of berm width 12” with 2’ horizontal to 1’ vertical slope) is achieved. <p>Note: Use transit to ensure level lifts and overall berm height</p>
<p>6.0 Compact and add height (if needed) to ‘old’ berm walls</p>	<ol style="list-style-type: none"> 1. Use backhoe to scar the top of the existing berm (to create good interface with berm material). 2. Use compactor and make pass over material to achieve compaction. 3. Add berm material as needed in 12” lifts. 4. Wet material as needed with fresh water. 5. Use compactor and make pass over material to achieve compaction. 6. Repeat steps 2-4 until designed berm height (top of berm width 12” with 2’ horizontal to 1’ vertical slope) is achieved. <p>Note: Use transit to ensure level lifts and overall berm height</p>
<p>7.0 Reinstall fencing (if needed)</p>	<ol style="list-style-type: none"> 1. Re-erect any fencing that was taken down in order to perform the berm construction.
<p>8.0 Complete Documentation</p>	<ol style="list-style-type: none"> 1. Verify and document the ‘as- built’ dimensions of the berm 2. Verify and document the changes to the berm on the site plot plan 3. Document the field ticket costs in the tracking spreadsheet