

## APPLICATION OF CHEMICAL RESISTANT PROTECTIVE COATING ON CONCRETE BUNDS IN WATER AND WASTEWATER TREATMENT PLANTS

SPECIFICATION: CR5

ISSUE: 3

DATE: FEBRUARY 2022

### 1.0 SCOPE

This document summarises the procedure for the application of a 2-pack chemical resistant epoxy coating on concrete chemical bunds.

### 2.0 PURPOSE

The purpose of this coating specification is to prepare a concrete substrate, including concrete repairs and apply a chemical resistant coating system on concrete chemical bunds.

### 3.0 DEFINITIONS

<b>ACA</b>	Australasian Corrosion Association
<b>ACRA</b>	Australasian Concrete Repair and Remedial Building Association
<b>CIA</b>	Concrete Institute of Australia
<b>Contractor</b>	The Service Provider or its Sub-contractor who will undertake the works
<b>ICRI</b>	International Concrete Repair Institute
<b>ITP</b>	Inspection and Test Plan(s) for the Works
<b>NACE</b>	National Association of Corrosion Engineers
<b>Principal</b>	The Water Corporation or The Alliance or Developer for the purposes of externally contracted asset delivery
<b>Principal's Representative</b>	Nominated person(s) by the principal to act as the Principal's Representative, on their behalf.
<b>SSPC</b>	Society for Protective Coatings
<b>Work(s)</b>	The concrete substrate preparation, coating application and inspection to be undertaken by the Contractor to which this coating specification applies

### 4.0 GENERAL

- 4.1 Works shall only be carried out by competent, experienced personnel.
- 4.2 The coating contractor shall nominate a certified coating inspector to perform inspections and maintain appropriate records for the work performed. Coating Inspector engaged in testing, monitoring and verification of surface preparation and coating application shall

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hold relevant inspection qualifications and current certifications (e.g., NACE or ACA) or approved by the Principal.

## **5.0 CONCRETE REPAIR AND COATING IDENTIFICATION**

- 5.1 Prior to application of coating, The Contractor shall carry out visual inspection and delamination survey by hammer tapping to identify and confirm areas of defective concrete for repair works. The Contractor shall identify and document concrete defect areas and record defects in Defects Mapping Sketch and/or Drawings in a format agreed with the Principal and submit to Principal for review and approval for a minimum of 10 days prior to commencement of repair works.
- 5.2 Defective concrete is defined as areas of the concrete or concrete repairs, which has cracking or delamination or spalling (including exposed corroded reinforcement) or rust stains and inadequate or failing past patch repairs.

## **6.0 CONCRETE REPAIRS**

- 6.1 Contractor shall repair the defective concrete in accordance with Section 6.0 of this Specification.
- 6.2 **For static (non-moving) cracks**, cracks shall be repaired with epoxy resin or mortar compatible with the epoxy coating, e.g., Epigen 0301 if Epigen 4028/4029 epoxy coating system or similar approved equivalent is used. The cracks shall be 5mm x 5mm “V” grooved and cleaned of laitance, contaminants prior to filling with epoxy resin or mortar. When cracks are completely filled resin/mortar shall be cured to manufacturer’s instruction and surface prepared to have epoxy coating as required. It is preferable to fill cracks at the coolest part of the day (i.e., early in the morning) followed with epoxy coating thereafter.
- 6.3 **For dynamic (moving) cracks**, the cracks shall be repaired with flexible crack bridging fabric system, e.g., Epigen KIS™ system or similar approved equivalent that is compatible with the epoxy coating system. The application of flexible crack bridging system shall strictly follow the manufacturer’s specification.
- 6.3.1 The two sides of crack surface that are to receive the fabric binder/primer shall be cleaned of laitance and contaminants by mechanical means to ensure that the bond of the binder/primer to substrate can satisfy the performance requirements.
- 6.3.2 Apply the binder/primer for the crack bridging system over the crack. The fabric shall be applied directly on the binder/primer while the binder/primer is wet and tacky and pressed in and smoothed (no crease or fold is permitted).

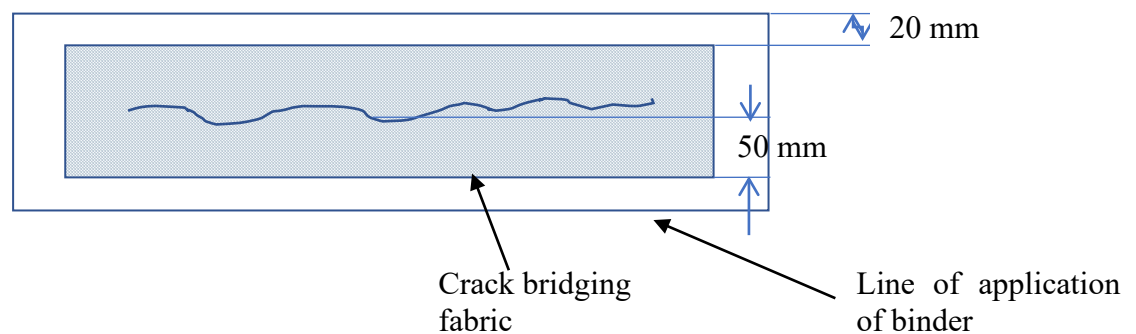
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- 6.3.3 Allow adequate curing time for the fabric binder/primer (typically curing time is 24 hours depending on the manufacturer's recommendation) prior to first coat of epoxy coating. The first coat of the epoxy shall be applied on after the fabric is completely dry and stable.
- 6.3.4 Typical extent of surface preparation, application of binder and the fibre are shown in [Refer: Figure1].



**Figure 1 – Typical crack bridging system application**

- 6.4 Concrete patch repair.** Carry out patch repair to the areas of defective concrete as defined in Section 5.2.
- 6.4.1 The reinstatement repair mortar shall be a proprietary single component polymer-modified, cement-based blend of powders such as Parchem Renderoc HB70 or LA55 or similar approved equivalent, depending on the size and depth of the patch repair.
- 6.4.2 The approved perimeter of the defective concrete to be removed shall be saw cut to a depth of 20mm to delineate the extent of the repair and to avoid feather edges in the repair. The saw cut areas shall be kept as rectangular as possible.
- 6.4.3 Any exposed reinforcement shall be cleaned to AS 1627.4 Class 2.5 with particular attention to the back of exposed steel bars. No rebar to be cut or augmented without approval of Water Corporation. After cleaning, apply zin-rich epoxy primer, e.g., Nitoprime zinc rich 75 microns DFT.
- 6.4.4 Concrete substrate shall be clean sound and pre-soaked with water for few hours. Just prior to application, the concrete surface shall in surface dry state. Epoxy bonding agent, e.g., Nitoprime EP or similar approved equivalent shall be applied on the substrate. Placement of mortar shall be performed while bonding agent is still tacky.
- 6.4.5 Where multiple layers are applied, the surface of the repair mortar shall be scarified before curing for adhesion of next layer.

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6.4.6 Adequate wet curing method, e.g., cover concrete repair area with wet hessian shall be implemented for repair with minimum wet curing time of 3 days prior to receiving coating application. **Use of curing compound for curing is not permitted.**

6.5 **Any alternative concrete repair methodology and/or materials that are not stipulated in this Specification** shall be submitted to the Principal and subject to approval by the Principal prior to commencement of repair works.

**7.0 SURFACE PREPARATION**

7.1 The concrete substrate shall be sound, dry, free from dust/dirt, any surface defects, laitance and contaminants (e.g., oil, grease, salts, chemicals, paint, formwork release and curing membranes) that may be detrimental to the coating adhesion to the substrate.

7.2 Prior to coating application, the concrete substrate shall be prepared to CSP 2 or 3 surface profile with methodologies and standards to follow ICRI Guideline No. 310.2R-2013, NACE SSPC-SP 13/NACE No. 6 and the coating manufacturer’s recommendations for surface preparation. **[Refer: Table 1]**.

**Table 1 - Acceptance Criteria for Concrete Surface After Surface Preparation**

Property	Test Method	Acceptance Criteria
Surface profile	ICRI Guideline No. 310.2R-2013	CSP 2 or 3
Surface cleanliness	Visible dust	No significant dust
pH	Main Road WA Test Method 620.1 – 2012	pH>9
Moisture content	Handheld moisture meter	<5%

7.3 **Please note surface preparation by acid etching is not permitted.**

7.4 Floor to wall joints, sharp corners etc. shall be “coved” (10mm x 10mm) with epoxy mortar, e.g., Fosroc Nitomortar AP or similar approved equivalent prior to the coating application. **[Refer: Figure 2]**.

7.5 If existing coating was fully removed to expose the concrete substrate, the exposed substrate shall be prepared to requirements as stipulated in Section 7.1 to 7.3.

7.6 Where full or part of existing coating is retained, adhesion testing shall be performed to verify adhesion to concrete substrate prior to application of new coating. Adhesion testing results shall comply to acceptable value of >2.1 MPa. The surface of existing coating shall be adequately prepared, such that the new coating can bond successfully to the existing coating.

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- 7.7 If any joint sealant materials are noted, remove the sealant materials and repair joint to requirements of Section 6.3.



**Figure 2 – Coving on the floor to wall joint**

**8.0 ATMOSPHERIC CONDITIONS**

- 8.1 Prior to and during coating application, the contractor shall record details in Daily Coating and Inspection Report pertaining to environmental conditions including daily ambient and surface temperature, relative humidity and dew point.
- 8.2 Prior to coating application, as a minimum the ambient temperature shall typically be  $>10$  °C and RH  $<80\%$ .

**9.0 COATING MATERIALS**

- 9.1 Refer Section 14.0 commonly used chemical resistant coatings for concrete bunds in water & wastewater treatment plants. Select relevant coating system based on the type of chemical stored in the concrete bund

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- 9.2 The coating components shall be thoroughly mixed in the specified proportions. Coating materials shall be used within the “pot-life” period claimed by the manufacturer for the relevant site conditions.
- 9.3 Coating specifications inclusive of datasheets, coating application, method statements ITPs shall be submitted to the Principal for approval at least 10 working days prior to commencement of the work.

#### **10.0 COATING APPLICATION & THICKNESS**

- 10.1 Brush or roll apply two or more coats of chemical resistant epoxy to produce **500 microns minimum dry film thickness** to bund walls and floor. [Refer: Figures 3 & 4].
- 10.2 If primer material is used, the Contractor shall ensure the primer is compatible with the epoxy coating as per the coating manufacturer’s recommendations.
- 10.3 For areas requiring a trafficable non-skid surface, i.e., bund floor area, broadcast silica/calcined Alumina of 100 mesh between the 1st and 2nd (or final coat) of epoxy. The Contractor shall ensure the 1st coat is not fully cured before application of silica broadcast. [Refer: Figure 5]
- Note: Ensure the broadcasted particle do not pierce through the coating.
- 10.4 For interface areas of concrete and steel/other elements which are likely to come into contact with moisture or chemicals, the epoxy coating shall be a continuous coating finish and be applied up a minimum of 200mm the steel/other element surface from the coated concrete surface. For example, the tank ring plate, pipe steel upstands, base of ladders and stairs, etc. [Refer: Figures 6 and 7].
- 10.5 Recommended drying times between coats for on-site conditions shall not be exceeded.
- 10.6 Applied coatings shall be protected from rain or moisture until fully cured.

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**Figure 3 – Full coating on the internals of the concrete wall.**



**Figure 4 – Termination of coating on the outside of the concrete wall.**



**Figure 5 – Full coating on the anti-skid floor**

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Figure 6 – Typical coating finish at the interface between concrete plinth and tank wall



Figure 7 – Typical coating finish at the interface between concrete plinth and pipe supports

## 11.0 QUALITY INSPECTION AND TESTING OF COATING

- 11.1 **Visual Testing** – The Contractor shall visually examine for surface defects and any discontinuity arising after curing completed.
- 11.1.1 The finished coating shall be of uniform thickness, colour, appearance and gloss. It shall be fully cured, adherent, coherent and free from holidays, laps, excessive sags, blistering, checking, wrinkling, overspray, patchiness and any other defects that may impair the performance and/or appearance of the coating.
- 11.1.2 Defects such as pinholes, cracks, blisters, voids, foreign inclusions and irregular profile peaks shall be marked for repair and retested upon full cure of the repaired coating.
- 11.2 **Spark Testing** – The Contractor shall carry out holiday testing to the finished coating in accordance with NACE Standard SP0188 – Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates. The Contractor shall allow for adequate curing time and nominate a minimum spark testing time after application to prevent damage to the finished coating from the spark testing. This is usually done at least 7 days after final coat application, depending the manufacturer’s recommendation.
- 11.3 **Adhesion Testing** – The Contractor shall carry out adhesion testing to the finished coating in accordance with AS/NZS 1580 Method 408.5 to determine the adhesion strength of the coating to the substrate. Reference shall also be made to ASTM Standard D4541, ASTM D7244 and ASTM C1584/C1584M. [Refer: Figure 8].
- 11.3.1 The minimum acceptable adhesion value shall be 2.1 MPa in accordance with SSPC-SP 14/NACE No. 6.



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- 11.3.2 The location of test sites shall be identified and agreed upon by both the Contractor and the Principal prior to the start of attaching the dollies to the substrate. It is normally carried out at the non-coated bund surface, such as the outer surface of the bund wall. Test site shall be representative of the entire application process, performed in conjunction with bund works, i.e., like for like. If test is performed on the coated bund area, the coating in test area shall be made good.
- 11.4 **Coating Thickness Testing** – The Contractor shall carry out Coating DFT test using concrete coating thickness gauge to AS 4894.4. [Refer: Figure 9].
- 11.5 The Contractor shall provide the Principal’s Representative adequate prior notice of minimum 10 days for hold point items in the ITP. No works identified as hold point shall commence without the Principal’s acceptance review and approval.



Figure 8 – Typical adhesion test equipment



Figure 9 – DFT testing using Positector® gauge

### 12.0 COMPLETED RECORDING AND REPORTING

- 12.1 Following testing Completion Report shall be submitted by the Contractor. The Contractor shall keep detailed records and reports that include but not limited to:
- Environmental conditions (i.e., daily temperature, relative humidity, dew point, etc.)
  - Concrete surface moisture content
  - Surface preparation profile
  - Coating Dry Film Thickness readings
  - Adhesion Test readings
  - Holiday Testing readings
  - Photographic evidence of surface preparation, coating application, and other quality inspection and testing results.

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The Completion Report shall be made available to the Principal's Representative at the completion of the project.

**13.0 CONTRACTOR'S RESPONSIBILITY**

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- 13.1 The Contractor shall supply all necessary plant, equipment, materials and labour, prepare the surface, repair concrete substrate defects, apply the protective coating, carry out quality control inspection testings and records in accordance with this specification and the coating manufacturer's requirements.
- 13.2 The preceding inspection clauses shall not relieve the Contractor of their responsibility to supply materials and perform work in accordance with the requirements of any overriding contract documentation.

### 14.0 Commonly Used Chemical Resistant Coatings for Concrete Bunds in Water & Wastewater Treatment Plants

Chemical Name	Epigen	Sika	Parchem	BASF	Epimax	SIM	Chesterton
Alum. Sulphate - Alum [25%]	Chemproof 4029	Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	444AR	Chemclad SC Chemclad XC	CS4 NVE
Aluminium Chloride Hydroxide [24-40%]	Chemproof 4029	Sikagard 62	Nitocote EP410 + Nitofloor N	Ucrete	444AR	Chemclad SC Chemclad XC	CS4 NVE
Anhydrous Ammonia	Chemproof 4029	Sikagard 62	Nitocote EP410 + Nitofloor N	Ucrete	---	Chemclad SC Chemclad XC	CS4 NVE
Citric Acid [90%]	Chemproof 4029	Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	444AR	Chemclad XC	NVE
Chlorine	Chemproof 4029	Sikagard 62	Nitocote EP410 + Nitofloor N	Ucrete	---	Chemclad SC Chemclad XC	NVE
Ferric Sulphate [45%]	Chemproof 4029	Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	444AR	Chemclad XC	CS4 NVE
Fluorosilicic Acid	Chemproof 4029	Sikagard 63N	Nitofloor N short term contact	Ucrete	---	Chemclad XC	NVE
Hydrochloric Acid [26%]	Chemproof 4029	Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	421HAR	Chemclad XC	988 NVE
Magnesium Hydroxide Liquid	Chemproof 4029	Sikagard 62 Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	---	Chemclad SC Chemclad XC	NVE
Magnesium Hydroxide	Chemproof 4029	Sikagard 62 Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	---	Chemclad SC Chemclad XC	NVE
Potassium Permanganate	Chemproof 4029	Sikagard 62 Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	421HAR	Chemclad SC Chemclad XC	CS4 NVE
Sodium Hydroxide [Caustic Soda 50%]	Chemproof 4029	Sikagard 62 Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	444AR	Chemclad SC Chemclad XC	CS4 NVE
Sulphuric Acid [98%]	Chemproof 4029	Sikagard 63N	Nitofloor N short term contact	Ucrete	421HAR	Chemclad XC	CS4 988
Sodium Bisulphite [45-40%]	Chemproof 4029	Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	444AR	Chemclad SC Chemclad XC	CS4 NVE
Sodium Hypochlorite [12.5%]	Chemproof 4029	Sikagard 62 Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	444AR	Chemclad XC	NVE
Sod. Metabisulphite [45 - 40%]	Chemproof 4029	Sikagard 62 Sikagard 63N	Nitocote EP410 + Nitofloor N	Ucrete	---	Chemclad SC Chemclad XC	CS4 NVE

Note:

- Where a coating system requires more than one product to be used (e.g., Primer and top coat) both product shall be from the same supplier unless approved otherwise by the Principal
- The Principal cannot be held responsible for the claims or performance guarantees offered by construction product suppliers.
- Due to continuous product development, coating contractors shall check with product suppliers to confirm that the product names and numbers are current at the time of ordering.

## 15.0 INSPECTION AND TEST PLAN [SAMPLE]

<b>INSPECTION TEST AND PLAN</b>		<b>EXAMPLE: CR5</b>
<b>Contractor/customer:</b> ABBC Engineering	<b>Date of issue:</b> 1 <sup>st</sup> July 2021	
<b>Project title:</b> Kwinana Sodium Hydroxide Bund Coating Repair	<b>Prepared by:</b> Joe Bloggs	
<b>Water Corporation project No.:</b> CW 1999999	<b>Job/contract number:</b> xxxxxxxxx	
<b>Description and system:</b> Sodium Hydroxide Bund Coating System CR5	<b>No. of pages:</b> 4	
<p><b>Legend of inspection points:</b></p> <p><b>H = Hold Point.</b> Work may not proceed without approval or notification, unless approved by the principal or contractor.</p> <p><b>W = Witness Point.</b> Work may proceed without the presence of the principal.</p> <p><b>S = Surveillance.</b> Witness at random, no formal notification required.</p> <p><b>V = Verify.</b></p> <p><b>R/A = Review.</b> Review documents &amp; accept.</p> <p><b>(work can proceed if Principal cannot attend hold point inspection within three hours of notified time for attendance)</b></p>		

NO	Activity/Operation	Specification/Document	Acceptable Criteria	Verifying Document	Person Responsible	Inspection & Verification Points					
						Sub-Contractor	Sign	Contractor	Sign	Principal or Nominee	Sign
1	Review Client Specifications	<ul style="list-style-type: none"> <li>– WC Specification CR5</li> <li>– WC Specification DS 95</li> </ul>	Read and fully understand the requirements & responsibilities.	Signed and approved ITP	QC Inspector	R/A		R/A		V	
2	Coating applicators qualification	<ul style="list-style-type: none"> <li>– WC Specification DS 95</li> <li>– ASTM D4228</li> </ul>	As per coating contractor's internal procedure and standards.	Verification of competency record (VOC)	QC Inspector	H		V		V	
4	Certificate of inspection personnel	<ul style="list-style-type: none"> <li>– WC Specification DS 95</li> <li>– NACE/ACA</li> </ul>	Certified as per specification requirements.	NACE/ACA	QC Inspector	H		H		W	
4	Calibration of all test equipment	<ul style="list-style-type: none"> <li>– WC Specification DS 95</li> <li>– SSPC PA2</li> <li>– AS4894.4</li> <li>– ISO 17025</li> </ul>	Equipment manufacturers criteria, qualified person, or NATA registered or equivalent testing facility.	Calibration and testing certificates and records.	QC Inspector	V		V		W	
5	Environment Control	<ul style="list-style-type: none"> <li>– Contractor's Work Method Statement</li> <li>– WC Specification DS 95</li> </ul>	Protect or remove critical instruments prior coating Prepare adequate laydown area	Contractor's Work Method Statement	Supervisor	R/A		R/A		V	

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						Sub-Contractor	Sign	Contractor	Sign	Principal or Nominee	Sign
			All products be contained in portable bund Spill kit to be on site								
6	Concrete Defects Identification	WC Specification CR5	Mark up defects extent and location in sketch or drawing	Defect Sketch/Drawing	Supervisor	H		V		V	
7	Static Cracks Repair [Insert epoxy product name]	WC Specification CR5	V grooved cracks 5mmx5mm Substrate for epoxy resin/mortar [Insert epoxy product name] cleaned, free of debris Epoxy mortar finish flushed	Daily coating and inspection report	Supervisor	H		V		V	
8	Moving cracks Repair [Insert crack bridging system]	WC Specification CR5 Manufacturer's specification	Apply crack bridging bandage system [Insert crack bridging system] to Manufacturer's specification	Daily coating and inspection report	Supervisor	H		V		V	
9	Concrete Repairs with [Insert repair mortar product name]	WC Specification DS 95 WC Specification CR5	Square cut to delineation depth 20mm Breakout to sound concrete Clean rebar to AS 1627.4 Class 2.5 and prime with zinc rich primer No cracks, delaminations to finished repair mortar [Insert repair mortar product name]	Daily coating and inspection report	Supervisor	H		V		V	
10	Substrate preparation	WC Specification DS 95 WC Specification CR5	Surface profile CSP 2 or 3 Substrate clean, free of debris, no laitance Oil, grease, dirt, and other foreign matter shall be removed. Ensure surface Humidity is <5%	Daily coating and inspection report	Supervisor or/ QC Inspector	H		H		W	

NO	Activity/Operation	Specification/Document	Acceptable Criteria	Verifying Document	Person Responsible	Inspection & Verification Points					
						Sub-Contractor	Sign	Contractor	Sign	Principal or Nominee	Sign
11	Ambient conditions	<ul style="list-style-type: none"> <li>- WC Specification DS 95</li> <li>- WC Specification CR5</li> <li>- WC Specification A5</li> <li>- AS4894.7</li> <li>- AS4894.14</li> </ul>	Ambient conditions shall be recorded at least 4 times per shift Relative humidity <80% Min/Max substrate Temp 11°C - 55°C Min Substrate Temp 4°C above dew point.	Daily coating and inspection report	QC Inspector	H		W		W	
12	Apply Primer (if applicable) <b>Insert the Primer Product Name</b>	<ul style="list-style-type: none"> <li>- WC Specification DS 95</li> <li>- WC Specification CR5</li> </ul>	Monitor WFT/DFT regularly during and after application.	Daily coating and inspection report	QC Inspector	V		W		W	
13	Apply 1st coat <b>Insert the Coating Product Name</b>	<ul style="list-style-type: none"> <li>- WC Specification DS 95</li> <li>- WC Specification CR5</li> </ul>	Monitor WFT/DFT regularly during and after application.	Daily coating and inspection report	QC Inspector	V		W		W	
14	Apply non-slip grit (for trafficable floor)	<ul style="list-style-type: none"> <li>- WC Specification CR5</li> </ul>	Even spread Not penetrating coating	Daily coating and inspection report	QC Inspector	V		W		W	
15	Apply 2 <sup>nd</sup> coat <b>Insert the Coating Product Name</b>	<ul style="list-style-type: none"> <li>- WC Specification DS 95</li> <li>- WC Specification CR5</li> </ul>	Monitor WFT regularly during application. 500 µm DFT minimum	Daily coating and inspection report	QC Inspector	V		W		W	
16	Finish coat inspection	<ul style="list-style-type: none"> <li>- WC Specification DS 95</li> <li>- WC Specification CR5</li> <li>- AS4894.4</li> <li>- AS4894.4</li> <li>- SSPC PA2</li> </ul>	Visual inspection for runs, sags and any inclusions etc. Coating cured and final DFT recorded. All batch numbers are documented.	Daily coating and inspection report	QC Inspector	H		H		W	
17	Holiday testing for as defined in the ITP.	<ul style="list-style-type: none"> <li>- WC Specification CR5</li> <li>- AS 4894.1</li> </ul>	110% of total coated accessible surface area.	Daily coating and inspection report	Supervisor / Inspector	H		H		H	
18	Adhesion testing on non-coated or coated concrete surface	<ul style="list-style-type: none"> <li>- WC Specification DS 95</li> <li>- WC Specification CR5</li> <li>- AS4894.9</li> </ul>	Adhesion test of cured coating on non coated or coated concrete surface (Pull off test). Acceptable value >2.1 MPa	Daily coating and inspection report	Supervisor / Inspector	H		H		H	

NO	Activity/Operation	Specification/Document	Acceptable Criteria	Verifying Document	Person Responsible	Inspection & Verification Points					
						Sub-Contractor	Sign	Contractor	Sign	Principal or Nominee	Sign
19	Verifying acceptance documentation.	<ul style="list-style-type: none"> <li>- WC Specification DS 95</li> <li>- WC Specification CR5</li> <li>- AS4894.12</li> </ul>	Check that all inspection, test documentation and completion reports have been completed and signed. Submit documentation to Contractor/Principal.	Completion Report. IRC and signed ITP.	Inspector / Principal	H/R		RA		RA	
<b>COMMENTS AND NOTES:</b>											
Consider protection to existing tanks, instruments, etc in the bund vicinity or adjacent before commencement of works and add this as line item in the ITP as required											
Sub-contractor, contractor then principal to sign ITP at completion of works and ITP close out.											
This example ITP covers the coating system CR5 for chemical bunds coating											

ITP Acceptance for Issue	Name	Position	Signature	Date
Subcontractor				
Contractor				
Water Corporation				

Once ITP is accepted and signed by all parties, work can proceed

--End of Document---