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HANGAR 1 ACTION MEMORANDUM

TABLE 5-1

SUMMARY OF FEDERAL CHEMICAL-SPECIFIC ARARS^a

Requirement	Prerequisite	Citation^b	ARAR Determination	Comments
Clean Water Act of 1977, as Amended (33 U.S.C., ch. 26, §§ 1251–1387)				
Water quality standards.	Discharges to waters of the United States.	40 C.F.R. § 131.36(b) and 131.38	Applicable	These standards are potentially applicable to discharges of surface water, which may be generated through stormwater runoff at the site.
Water quality standards.	Discharges to the San Francisco Bay/ Sacramento–San Joaquin Delta Estuary.	40 C.F.R. § 131.37	Applicable	This establishes water quality criteria for discharges to surface waters. These standards may be potentially relevant and appropriate for site stormwater discharges.
Resource Conservation and Recovery Act (42 U.S.C., ch. 82, §§ 6901–6991[j])				
Defines RCRA hazardous waste. A solid waste is characterized as toxic, based on the TCLP, if the waste exceeds the TCLP maximum concentrations.	Waste.	Cal. Code Regs., tit. 22, §§ 66261.21, 66261.22(a)(1), 66261.23, and 66261.24(a)(1), and 66261.100	Applicable	Potentially applicable for determining whether waste is hazardous. RCRA provides specific guidance for determining both characteristic and listed hazardous wastes. Characteristic wastes will be generated during the response action.
Groundwater Protection Standards: requirements to ensure that hazardous constituents entering the groundwater from a regulated unit do not exceed the concentration limits for contaminants of concern in the uppermost aquifer underlying the waste management area of concern at the POC.	A regulated unit that receives or has received hazardous waste before 26 July 1982 or regulated units that ceased receiving hazardous waste prior to 26 July 1982 where constituents in or derived from the waste may pose a threat to human health or the environment.	Cal. Code Regs., tit. 22, § 66264.94(a)(1) and (3)(c), (3)(d), and (3)(e),	Relevant and Appropriate	The requirement is relevant and appropriate to vadose zone soil because although the site is not a regulated unit, it contains chemicals similar to what may be found in a regulated unit.
LDRs prohibit disposal of hazardous waste unless treatment standards are met.	Hazardous waste land disposal.	Cal. Code Regs, tit. 22., § 66268.1(f)	Applicable	Potentially applicable for hazardous waste

HANGAR 1 ACTION MEMORANDUM

TABLE 5-1

SUMMARY OF FEDERAL CHEMICAL-SPECIFIC ARARS^a

Requirement	Prerequisite	Citation^b	ARAR Determination	Comments
Treatment standards including technology requirements before hazardous waste can be disposed to land.	Hazardous waste land disposal.	Cal. Code Regs., tit. 22, § 66268.40	Applicable	Potentially applicable for hazardous waste
A person shall not emit from any source for a period or periods aggregating more than 3 minutes in any hour, a visible emission, which is as dark as or darker than No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view to an equivalent or greater degree. All alternatives will use dust control methods to minimize visible emissions. BMPs will be implemented to reduce the potential for emissions from the site.	BAAQMD air regulations.	Regulation 6-301	Applicable	
This rule states that architectural coatings must meet standards for maximum VOC content, and lists specific VOC content for each type of coating.		Regulation 8, Rule 3	Applicable	
Air monitoring for lead, a HAP, is required. Lead emission discharges in excess of 1 microgram per cubic meter, as measured at ground level, are prohibited. This regulation is potentially applicable if structural steel is subject to grinding or scarifying.		Regulation 11, Rule 1	Applicable	
This rule describes the asbestos management requirements during demolition and renovation projects.		Regulation 11, Rule 2	Applicable	

HANGAR 1 ACTION MEMORANDUM
TABLE 5-1
SUMMARY OF FEDERAL CHEMICAL-SPECIFIC ARARS^a

Notes:

^a Many potential action-specific ARARs contain chemical-specific limitations and are addressed in the action-specific ARARs table.

^b Only the substantive provisions of the requirements cited in this table are potential ARARs.

Abbreviations and Acronyms:

§ – section
ARAR – applicable or relevant and appropriate requirement
BAAQMD – Bay Area Air Quality Management District
BACT – best available control technology
BMP – Best Management Practices
C.F.R. – Code of Federal Regulations
Cal. Code Regs. – California Code of Regulations
ch – chapter
HAP – hazardous air pollutant
LDR – land disposal restriction
PM₁₀ – particulate matter less than 10 microns in diameter
POC – point of compliance
RCRA – Resource Conservation and Recovery Act
TCLP – toxicity characteristic leaching procedure
tit. – title
UTS – universal treatment standard
VOC – volatile organic compound

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HANGAR 1 ACTION MEMORANDUM
TABLE 5-2
SUMMARY OF STATE CHEMICAL-SPECIFIC ARARS^a

Requirement	Prerequisite	Citation ^b	ARAR Determination	Comments
State and Regional Water Quality Control Boards				
Authorizes the SWRCB and RWQCB to establish in water quality control plans beneficial uses and numerical and narrative standards to protect both surface water and groundwater quality. Authorizes regional water boards to issue permits for discharges to land or surface or groundwater that could affect water quality, including NPDES permits, and to take enforcement action to protect water quality.		Cal. Water Code, div. 7, §§ 13241, 13243, 13263(a), 13269, and 13360 (Porter-Cologne Act)	Applicable	The Navy accepts the substantive provisions of §§ 13241, 13243, 13263(a), 13269, and 13360 of the Porter-Cologne Act enabling legislation, as implemented through the beneficial uses, WQOs, waste discharge requirements, promulgated policies of the Basin Plan for the San Francisco Bay Region, as potential ARARs.
Describes the water basins in the San Francisco Bay Region, establishes beneficial uses of groundwater and surface water, establishes WQOs, including narrative and numerical standards, establishes implementation plans to meet WQOs and protect beneficial uses, and incorporates statewide water quality control plans and policies.		Comprehensive Water Quality Control Plan for the San Francisco Bay (Basin Plan) (Cal. Water Code § 13240)	Applicable	Substantive requirements pertaining to beneficial uses, WQOs, and certain statewide water quality control plans are potential state ARARs for impacts to surface water during this removal action.
Cal/EPA Department of Toxic Substances Control				
Definition of “non-RCRA hazardous waste.”	Waste.	Cal. Code Regs., tit. 22, § 66261.3(a)(2)(C) or 66261.3(a)(2)(F), 66261.22(a)(3) and (4), 66261.24(a)(2)-(a)(8), 66261.101	Applicable	Potentially applicable for determining whether a waste is a non-RCRA hazardous waste.
This regulation oversees LDRs for certain classifications of non-RCRA hazardous waste including asbestos and aqueous wastes containing metals, both of which would be generated as a result of the response action.	Hazardous waste LDRs for non-RCRA, California hazardous waste.	22 Cal. Code Regs. 66268.105	Applicable	Potentially applicable where non-RCRA wastes are generated.

HANGAR 1 ACTION MEMORANDUM
TABLE 5-2
SUMMARY OF STATE CHEMICAL-SPECIFIC ARARS^a

Notes:

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Abbreviations and Acronyms:

§ – section

ARAR – applicable or relevant and appropriate requirement

Cal. Code Regs. – California Code of Regulations

Cal. Water Code – California Water Code

Cal/EPA – California Environmental Protection Agency

div. – division

gpd – gallons per day

LDR – land disposal restriction

Navy – Department of the Navy

NPDES – National Pollutant Discharge Elimination System

RCRA – Resource Conservation and Recovery Act

RWQCB – Regional Water Quality Control Board

SWRCB – State Water Resources Control Board

WQO – Water Quality Objective

HANGAR 1 ACTION MEMORANDUM
TABLE 5-3
SUMMARY OF FEDERAL LOCATION-SPECIFIC ARARS

Location	Requirement	Prerequisite	Citation ^a	ARAR Determination	Comments
National Historic Preservation Act of 1966, as Amended (16 U.S.C. § 470–470x-6)^b					
Historic project owned or controlled by federal agency	Action to preserve historic properties; planning of action to minimize harm to properties listed on or eligible for listing on the National Register of Historic Places.	Property included in or eligible for the National Register of Historic Places.	16 U.S.C. § 470-470x-6, 36 C.F.R., Pt. 800 40 C.F.R., § 6.301(b)	Applicable	Hangar 1 is individually eligible for listing in the National Register and is a contributing element of the U.S. Naval Air Station Sunnyvale Historic District, which is listed on the National Register. Applying the substantive provisions of the statute and regulations, the Navy will analyze alternatives for potential effects to Hangar 1 and the historic district. The analysis will aid in determining whether such effects are adverse, and if so, take into account measures that would avoid, minimize, or mitigate adverse effects.
Migratory Bird Treaty Act of 1972 (16 U.S.C. §§ 703–712)					
Migratory bird area	Protects almost all species of native migratory birds in the U.S. from unregulated “take,” which can include poisoning at hazardous waste sites.	Presence of migratory birds.	16 U.S.C. § 703	Relevant and Appropriate	Except as permitted by regulations, it is unlawful to pursue, hunt, take, capture, offer to sell, barter, purchase, or deliver any migratory bird, nest, or egg. The remedial design process will identify measures necessary to prevent an unregulated “take” of protected bird species. It is the Navy’s position that this act is not legally applicable to Navy actions. However, substantive portions of the Migratory Bird Treaty Act are considered a potentially relevant and appropriate requirement for this removal action. A biological survey will be conducted prior to starting any intrusive work, and the impacts on nesting/roosting raptors will be minimized.

Notes:

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Abbreviations and Acronyms:

§ – section

ARAR – applicable or relevant and appropriate requirement

C.F.R. – Code of Federal Regulations

Navy – Department of the Navy

U.S.C. – United States Code

HANGAR 1 ENGINEERING EVALUATION/COST ANALYSIS

TABLE 5-4

SUMMARY OF STATE LOCATION-SPECIFIC ARARS

Location	Requirement	Prerequisite	Citation ^a	ARAR Determination	Comments
California Endangered Species Act (Cal. Fish & Game Code §§ 2050–2116)					
		Actions impacting birds or mammals.	Cal. Fish and Game Code § 3005(a)	Relevant and Appropriate	The taking of birds and mammals, including taking by poison (site contaminants), is prohibited. The taking of birds and mammals will be prevented by containing contaminants and severing the pathway of exposure to siding contaminants. It is the Navy’s position that the federal sovereign immunity has not been waived; therefore, the California Fish and Game Code does not legally apply. However, this requirement is deemed to be a potentially relevant and appropriate state ARAR.

Notes:

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Abbreviations and Acronyms:

- § – section
- ARAR – applicable or relevant and appropriate requirement
- Cal. Fish and Game Code – California Fish and Game Code
- Navy – Department of the Navy

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HANGAR 1 ACTION MEMORANDUM
TABLE 5-5
SUMMARY OF FEDERAL ACTION-SPECIFIC ARARS

Action	Requirement	Prerequisite	Citation	ARAR Determination			Comments
				A	R & A	TBC	
Resource Conservation and Recovery Act (42 U.S.C. §§ 6901–6991[i])							
Waste Piles	Allows generators to accumulate solid remediation waste in a U.S. EPA-designated pile for storage only, up to 2 years, during remedial operations without triggering LDRs.	Hazardous remediation waste temporarily stored in piles.	40 C.F.R. § 264.554(d)(1)(i–ii) and (d)(2), (e), (f), (h), (i), (j), and (k)	1,2,5,8,9,10,11			Applicable where solid, non-flowing RCRA wastes are stored in stockpiles.
On-site waste generation	Person who generates waste shall determine if that waste is a hazardous waste	Generator of waste.	Cal. Code Regs., tit. 22, § 66262.10(a), 66262.11	1-12, interior			Applicable for any operation where hazardous waste is generated. Several wastestreams including siding, loose paint, decontamination wastewater, and structural steel may be characterized as RCRA hazardous waste pending analysis due to lead concentrations. The determination of whether wastes generated during the removal activity are hazardous will be made at the time the wastes are generated.

HANGAR 1 ACTION MEMORANDUM
TABLE 5-5
SUMMARY OF FEDERAL ACTION-SPECIFIC ARARS

Action	Requirement	Prerequisite	Citation	ARAR Determination			Comments
				A	R & A	TBC	
	Requirements for analyzing waste for determining whether waste is hazardous.	Generator of waste.	Cal. Code Regs., tit. 22, § 66264.13(a) and (b)	1-12, interior			Applicable for waste generated during the removal action.
Hazardous waste accumulation	On-site hazardous waste accumulation is allowed for up to 90 days as long as the waste is stored in containers in accordance with § 66262.171–178 or in tanks, on drip pads, inside buildings, and is labeled and dated, etc.	Accumulate hazardous waste.	Cal. Code Regs., tit. 22, § 66262.34	1-12, interior			Applicable for operations where hazardous waste is generated and transported. The determination of whether wastes generated during response action activities are hazardous will be made at the time the wastes are generated.
Placement of waste in land disposal units	Movement of excavated materials to new location and placement in or on land will trigger LDRs for the excavated waste or closure requirements for the unit in which the waste is being placed.	Materials containing RCRA hazardous wastes subject to LDRs are placed in another unit.	Cal. Code Regs., tit. 22, § 66268.40	1-12, interior			Applicable where waste is placed on land.
Container storage	Containers of RCRA hazardous waste must be: <ul style="list-style-type: none"> • maintained in good condition, • compatible with hazardous waste to be stored, and closed during storage except to add or remove waste. Inspect container storage areas weekly for deterioration.	Storage of RCRA hazardous waste not meeting small-quantity generator criteria before treatment, disposal, or storage elsewhere, in a container.	Cal. Code Regs., tit. 22, § 66264.171, 66264.172, and 66264.173	1-12, interior			Applicable for waste stored in containers on site.

HANGAR 1 ACTION MEMORANDUM
TABLE 5-5
SUMMARY OF FEDERAL ACTION-SPECIFIC ARARS

Action	Requirement	Prerequisite	Citation	ARAR Determination			Comments
				A	R & A	TBC	
Toxic Substances Control Act (15 U.S.C. §§ 2601–2692)							
Disposal of PCBs	Provides expanded decontamination procedures and disposal options for PCBs. Ensures consistency with RCRA land disposal restriction.	Remedial actions involving PCBs.	40 C.F.R. § 761.50.	1-12, interior			Applicable to disposal of all TSCA waste, as well as the decontamination of tools and equipment that contact PCBs during the removal action.
	PCB bulk product waste shall be disposed of according to performance-based disposal options either in a TSCA-approved incinerator/landfill or by a TSCA-approved alternative disposal method.		40 C.F.R. § 761.62(a)	1-12, interior			Applicable to disposal of all TSCA waste, as well as the decontamination of tools and equipment that contact PCBs during the removal action.
Disposal of PCBs	All PCB articles or containers must be removed and disposed within 1 year of storage.	PCB concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater.	40 C.F.R. § 761.65(a)	1-12, interior			Applicable to waste regulated under TSCA.
	This ARAR provides expanded decontamination procedures. It is potentially applicable to the decontamination of TSCA waste, as well as the decontamination of tools and equipment that contact PCBs during the removal action.		40 C.F.R. § 761.79	1-12, interior			Applicable to disposal of all TSCA waste, as well as the decontamination of tools and equipment that contact PCBs during the removal action.

HANGAR 1 ACTION MEMORANDUM
TABLE 5-5
SUMMARY OF FEDERAL ACTION-SPECIFIC ARARS

Action	Requirement	Prerequisite	Citation	ARAR Determination			Comments
				A	R & A	TBC	
Marking of PCBs	The following must be marked as designated in 40 C.F.R. § 761.45: PCB containers containing greater than 50 ppm PCBs, PCB articles (see 40 C.F.R. § 761.45), PCB article containers, storage areas used to store PCBs, and PCB items for disposal. All marks must be on the exterior of PCB container and must be clearly visible.	PCB article described in 40 C.F.R. § 761.45.	40 C.F.R. § 761.40	1-12, interior			Applicable to waste regulated under TSCA.
PCB storage on-site prior to disposal	Storage facilities must be constructed with adequate roof and walls; with a floor and curb of impervious materials; without drain valves, floor drains, expansion joints, sewer lines, or other openings; and above the 100-year floodwater level.	PCB concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater.	40 C.F.R. § 761.65(b)	1-12, interior			Applicable if a long-term (1 year) storage area is determined to be necessary to manage TSCA wastes. Wastes that are both RCRA and TSCA will be managed under both regulations, following the more stringent of the two when overlap exists.

HANGAR 1 ACTION MEMORANDUM
TABLE 5-5
SUMMARY OF FEDERAL ACTION-SPECIFIC ARARS

Action	Requirement	Prerequisite	Citation	ARAR Determination			Comments
				A	R & A	TBC	
PCB storage on-site prior to disposal	<p>TSCA wastes in temporary storage (30 days or less) need not comply with the storage regulations in 40 C.F.R. § 761.65(b) for the following items: PCB articles and equipment that are non-leaking; leaking articles and equipment placed in non-leaking containers; PCB containers containing non-liquid PCBs, such as soil, rags, and debris; or liquid PCBs between 50-500 ppm if covered by the Spill Prevention, Control, and Countermeasures Plan.</p> <p>All storage areas must be properly marked.</p> <p>No item of movable equipment used to handle PCBs that comes in contact with PCBs shall be moved from the storage area unless it has been decontaminated as specified in 40 C.F.R. § 761.79.</p> <p>All stored articles must be checked for leaks every 30 days.</p> <p>Containers must be dated when they are placed in storage.</p>	Temporary storage of PCB concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater.	40 C.F.R. § 61.65(c)(3), (c)(4), (c)(7), and (c)(8).	1-12, interior			

HANGAR 1 ACTION MEMORANDUM
TABLE 5-5
SUMMARY OF FEDERAL ACTION-SPECIFIC ARARS

Action	Requirement	Prerequisite	Citation	ARAR Determination			Comments
				A	R & A	TBC	
Federal Hazardous Materials Transportation Law (49 U.S.C. §§ 5101–5127)							
Hazardous materials marking, labeling, and placarding	Each person who offers hazardous material for transportation or each carrier that transports it shall mark each package, container, and vehicle in the manner required.	Person who offers hazardous material for transportation; carries hazardous material; or packages, labels, or placards hazardous material.	49 C.F.R. § 172.300		1-12, interior		Relevant and appropriate for transport of DOT hazardous materials while on site. Shipping requirements must be met prior to off-site transport.
	Each person offering nonbulk hazardous materials for transportation shall mark the proper shipping name and identification number (technical name) and consignee’s name and address.		49 C.F.R. § 172.301				
	Hazardous materials for transportation in bulk packages must be labeled with proper ID number, specified in 49 C.F.R. § 172.101 table, with required size of print. Packages must remain marked until cleaned or refilled with material requiring other marking.		49 C.F.R. § 172.302				
	No package marked with a proper shipping name or ID number may be offered for transport or transported unless the package contains the identified hazardous material or its residue.		49 C.F.R. § 172.303				

HANGAR 1 ACTION MEMORANDUM
TABLE 5-5
SUMMARY OF FEDERAL ACTION-SPECIFIC ARARS

Action	Requirement	Prerequisite	Citation	ARAR Determination			Comments
				A	R & A	TBC	
	The markings must be durable, in English, in contrasting colors, unobscured, and away from other markings.contains the identified hazardous material or its residue.		49 C.F.R. § 172.304		1-12, interior		
	Labeling of hazardous material packages shall be as specified in the list.		49 C.F.R. § 172.400		1-12, interior		Relevant and appropriate for transport of DOT hazardous materials while on site. Shipping requirements must be met prior to off-site transport.
Hazardous materials marking, labeling, and placarding	Each bulk packaging or transport vehicle containing any quantity of hazardous material must be placarded on each side and each end with the type of placards listed in Tables 1 and 2 of 49 C.F.R. § 172.504.	Each person who offers for transport or transports any hazardous materials shall comply with these placarding requirements.	49 C.F.R. § 172.504		1-12, interior		Relevant and appropriate for transport of DOT hazardous materials while on site. Shipping requirements must be met prior to off-site transport.

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Abbreviations and Acronyms:

§ – section
A – Applicable
ARAR –applicable or relevant and appropriate requirement
Cal. Code Regs. – California Code of Regulations
C.F.R. – Code of Federal Regulations
DOT – Department of Transportation
LDR – land disposal restriction

PCB – polychlorinated biphenyl
ppm – parts per million
R&A – Relevant and Appropriate
RCRA – Resource Conservation and Recovery Act
TBC – to be considered
tit. – title
TSCA – Toxic Substances Control Act

U.S.C. – United States Code

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HANGAR 1 ACTION MEMORANDUM
TABLE 5-6
SUMMARY OF STATE ACTION-SPECIFIC ARARS

Action	Requirement	Prerequisite	Citation ^a	ARAR Determination			Comments
				A	R & A	TBC	
	<p>The Navy will comply with the substantive provisions of the NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activity (SWRCB Order No. 99-08) identified by the state of California as “TBC” guidance for compliance with the federal CWA and state of California water quality requirements. Associated reporting and recordkeeping are considered procedural and are, therefore, not substantive.</p> <p>The Navy will also comply with the substantive requirements for development and implementation of BMPs, substantive requirements for the content of an SWPPP, and substantive technical monitoring and analytical requirements (location and frequency of sample collection, parameters to be tested, and analytical methodologies).</p>	NPDES Stormwater Pollution Prevention.	SWRCB Order No. 99-08			1-12, interior	
Disposal of waste	Requires that nonhazardous solid waste as defined at § 20220(a) be discharged to a classified waste management unit.	Discharge of nonhazardous solid waste after 18 July 1997 to land for treatment, storage, or disposal.	Cal. Code Regs., tit. 27, § 20220(b), (c), and (d)	1-12, interior			Applicable for waste that meets the definition of nonhazardous waste. Wastes will be characterized prior to disposal to determine applicability
Disposal of non-RCRA waste	Land disposal restrictions for non-RCRA, California-regulated hazardous waste.	Non-RCRA, California-regulated hazardous waste disposal.	Cal. Code Regs., tit. 22, § 66268.105	1-12, interior			Applicable where more stringent than federal ARARs.

HANGAR 1 ACTION MEMORANDUM
TABLE 5-6
SUMMARY OF STATE ACTION-SPECIFIC ARARS

Action	Requirement	Prerequisite	Citation ^a	ARAR Determination			Comments
				A	R & A	TBC	
Disposal of waste	Requires that designated waste as defined at Cal. Water Code § 13173 be discharged to Class I or Class II waste management units.	Discharges of designated waste after 18 July 1997 (nonhazardous waste that could cause degradation of surface or ground waters) to land for treatment, storage, or disposal.	Cal. Code Regs., tit. 27, § 20210	1-12, interior			Applicable to waste that meets the definition of “designated waste.” All wastes will be characterized prior to disposal.
Waste disposal	Wastes that contain total lead in excess of 350 ppm, copper in excess of 2,500 ppm, or nickel in excess of 200 ppm must be disposed in a Class I landfill.	Waste containing total lead, copper, or nickel in excess of specified levels.	Cal. Health & Safety Code § 25157.8	1-12, interior			Applicable for disposal of wastes. All wastes will be characterized prior to disposal.

Notes:

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Abbreviations and Acronyms:

§ – section
A – Applicable
ARAR – applicable or relevant and appropriate requirement
BMP – Best Management Practice
Cal. Code Regs. – California Code of Regulations
Cal. Water Code – California Water Code
CWA – Clean Water Act
Navy – Department of the Navy
NPDES – National Pollutant Discharge Elimination System
ppm – parts per million
R & A – Relevant and Appropriate
RCRA – Resource Conservation and Recovery Act
SWPPP – Stormwater Pollution Prevention Plan
SWRCB – State Water Resources Control Board

TBC – to be considered
tit. – title