UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

JUL 0 9 2008

Mr. Richard Aschieris, Director
Port of Stockton
P.O. Box 2089
Stockton, CA 95201

Subject: Transmittal of "Port of Stockton Municipal Separate Storm Sewer Audit Report"

Dear Mr. Aschieris:

On March 18-20, 2008, representatives from EPA Region 9, the Regional Water Quality Control Board, Central Valley Region, and EPA contractors (PG Environmental, LLC) conducted a compliance audit of the Port of Stockton's implementation of its Municipal Separate Storm Sewer System (MS4) stormwater management program required by the NPDES permit issued by the Regional Board (NPDES Permit No. CAS0084077). File reviews, interviews of program staff, field verification of program activities, and compliance inspections of Port tenant facilities were conducted. I appreciate the excellent cooperation that our audit team received from your staff throughout this effort.

On April 10, 2008 the audit team conducted an exit conference call with your staff to communicate our preliminary findings. I enclose the final report of this audit, which indicates Port staff are knowledgeable and dedicated, and many aspects of the Port's stormwater management program are well-implemented. The audit identified potential violations of the Port's NPDES permit, as well as other areas where the audit team believe there are opportunities for the Port to improve its stormwater program management and its protection of local receiving water quality.

The audit team identified potential permit violations in regard to specific aspects of the following program areas:

- Municipal Operations (Permit Part C.9)
- Construction Program (Permit Part C.7)
- Development Standards (Permit Part C.14) and the
- Monitoring Program (Permit Part C.16 and the Monitoring and Reporting Program)

These are detailed in Section 2 of the audit report, and required corrective actions are identified in <u>underlined text</u>.

The audit team identified aspects of each of the above program areas, and with respect to the Port's Industrial and Commercial Facilities Oversight program element (Permit Part C.8), that we believe could be strengthened. Recommendations for improvement are discussed in Section 5 of the report and are highlighted in *italicized text*.

Please respond to each of the report's findings, as detailed in Sections 2 and 5 of the report, within sixty days of receipt of this letter. For the identified potential violations please also propose specific corrective actions and time frames within which the Port will commit to undertake them. In keeping with our practice, we plan to post a copy of the report on EPA's website: www.epa.gov/region9/water/npdes/ms4audits.html. At your request, we can also post a copy of the Port's response to the audit report.

Finally, as noted above, a number of industrial facility compliance inspections were conducted as part of the audit. Copies of those individual inspection reports will be mailed to the respective facilities shortly, with a copy to the Port at that time.

If you have any questions, please call me at (415) 972-3572, or contact Jeremy Johnstone of my staff at 415-972-3499 or via email at johnstone.jeremy@epa.gov.

Sincerely yours,

Alexis Strauss 9 July 2008
Alexis Strauss
Director, Water Division

Enclosures

cc (w/enclosures):
Jeff Kaspar, Port of Stockton
Jeff Wingfield, Port of Stockton
Pamela Creedon, CVRWQCB

Port of Stockton
Municipal Separate Storm Sewer System (MS4)
Audit Report

Section 1.0 Background

USEPA Region 9, with assistance from the California Regional Water Quality Control Board, Central Valley Region (Regional Water Board), and PG Environmental, LLC, a USEPA Region 9 contractor, conducted an audit of the Port of Stockton's Municipal Separate Storm Sewer System (MS4) program on March 18–20, 2008. Discharges from the Port's MS4 are regulated by Regional Water Board Order No. R5-2004-0136 (NPDES Permit No. CAS0084077) and an associated Monitoring and Reporting Program (MRP). Regional Water Board Order No. R5-2004-0136 (hereafter, Order) became effective on October 15, 2004, and will expire on October 15, 2009.

Section 1.1 Overview of Operations and Receiving Waters

The Port of Stockton is a special district that owns and operates the Port of Stockton (hereafter, Port) and its storm sewer system. The Port is located within the City of Stockton, which is the largest city in San Joaquin County, with a population of about 250,000. In 1997, the Regional Water Board issued a municipal storm sewer Order to the Port that regulated it as a medium municipal separate storm sewer system under federal storm water regulations (40 CFR Section 122.26(b)(7)). This action was taken with the consent of the Port, which wished to be regulated separately from the City of Stockton.

The Port is divided into a West Complex (formerly Rough & Ready Island) and an East Complex. The 640-acre East Complex is older and more developed than the West Complex, which was acquired from the United States Navy in September 2003. The West Complex is being converted and developed for full-scale shipping and manufacturing operations, which will include maritime, industrial, and commercial uses.

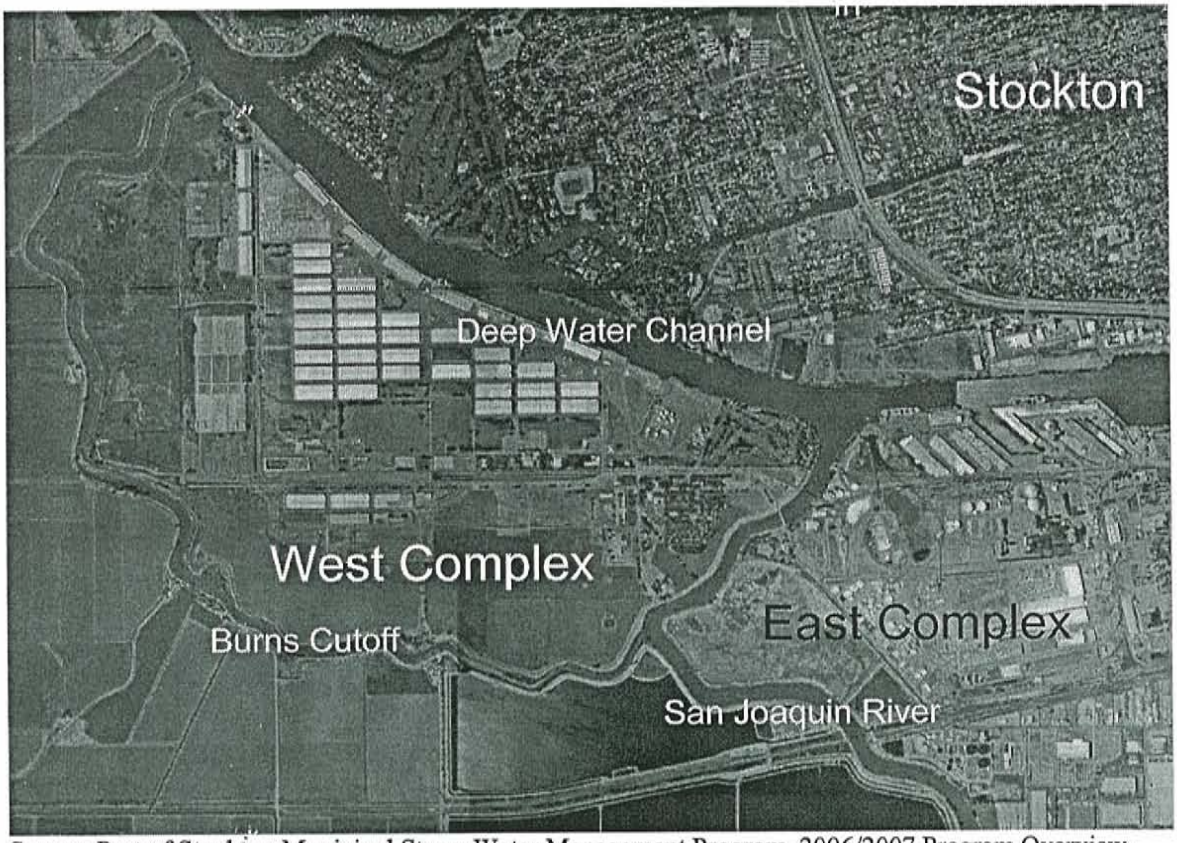
The 1,460-acre West Complex is surrounded by water: The Deep Water Ship Channel (DWSC) on the north, Burns Cutoff on the south and west, and the San Joaquin River to the east. The East Complex is bordered by the Deep Water Ship Channel (DWSC) to the north and the San Joaquin River to the west.

Discharges from the Port's storm sewer system consist of storm water runoff and non-storm water discharges, which discharge directly or indirectly to the San Joaquin River and the Stockton Deep Water Channel, a tributary to the San Joaquin River, as shown in the site location map in Figure 1. The receiving waters around the Port are tidally influenced.

Under Section 303(d) of the CWA, the Stockton Deep Water Channel (dioxin, furans, and PCBs), and San Joaquin River (boron, chlorpyrifos, DDT, diazinon, electrical conductivity, Group A pesticides, selenium, mercury, and unknown toxicity) are listed as water quality impaired for the pollutants shown in parentheses. In addition, low dissolved

oxygen causes impairment in the river from Channel Point to Disappointment Slough and pathogens impair surface waters near the Port of Stockton Turning Basin.

Figure 1. Aerial view of the Port of Stockton.



Source: Port of Stockton Municipal Storm Water Management Program, 2006/2007 Program Overview.

Section 1.2 Purpose

The purpose of the audit was to assess the Port's compliance with requirements contained within the Order. The audit team also assessed the Port's current implementation status with respect to its Storm Water Management Plan (hereafter, SWMP). Specifically, the audit evaluated the Port's compliance with Sections C.7 through C.16 of the Order, which includes provisions for the following program elements:

C.7	Construction
C.8	Commercial and Industrial
C.9	Municipal Operations
C.10	Illicit Discharge Detection and Elimination
C.11 – C.15	New Development/ Redevelopment Standards
C.16	Monitoring and Reporting

In addition, USEPA Region 9 and Regional Water Board staff conducted 26 individual inspections of tenants located on the Port's property. Twenty two (22) of these tenants had filed a Notice of Intent (NOI) for coverage under the State Water Resources Control

Board Industrial Storm Water General Permit, Order 97-03-DWQ (hereafter, General Permit). One tenant was regulated by an individual NPDES permit issued by the Regional Water Board, and three tenants are, at present, regulated solely under provisions contained in their lease agreements with the Port. The purposes of the tenant inspections were (1) to assess the adequacy, appropriateness, and maintenance of best management practices (BMPs) employed by tenants to minimize storm water contamination and (2) to gauge the overall effectiveness of the Port's commercial and industrial oversight program. These inspections were conducted by two teams of inspectors with the support and participation of Port personnel. Inspections of four Port-owned and -operated facilities were also performed.

The primary Port representatives present during the course of the audit were Mr. Jeff Wingfield, Port of Stockton Environmental Manager; Mr. Jason Cashman, Environmental Specialist; Mr. John Teravskis, Compliance Specialist, WGR Southwest, Inc.; and other staff from the Port and WGR Southwest, Inc. These persons are hereafter collectively referred to as Port personnel. The weather throughout the three-day period was sunny to partly cloudy.

The audit schedule was as follows:

Day	Time	Team 1	Teams 2 and 3
Tuesday March 18	9:00 am–10:00 am	Kickoff Meeting & Program Management Overview	
	10:00 am–4:30 pm	Commercial / Industrial & Illicit Detection and Elimination	Tenant Inspections
Wednesday March 19	8:30 am–4:30 pm	Construction and Development Standards & Municipal Operations	Tenant Inspections
Thursday March 20	8:30 am–4:30 pm	Monitoring and Reporting	Tenant Inspections

A brief exit interview was held on-site on March 20, 2008; a more in-depth exit interview occurred in a teleconference conducted on April 10, 2008.

The remainder of this audit report is organized as follows:

Section 2.0 **Order Compliance Review,** including findings from the audit that could be determined to constitute noncompliance

Section 3.0 **Summary of Port Tenant Inspections,** including observations regarding the Port's oversight of tenant activities

Section 4.0 **TMDL Preparedness and Program Effectiveness,** including an analysis of the Port's preparedness and planning for current and future Total Maximum Daily Load (TMDL) requirements and Waste Load Allocations (WLAs)

Section 5.0 **Recommendations for Improved Storm Water Management at and by the Port,** including program deficiencies that represent areas of concern for successful program implementation

Section 6.0 **Recommendations for Future Order Modifications**

Section 2.0 Order Compliance Review

This section of the audit report presents findings from the audit that could be determined to constitute noncompliance. The presentation of these findings does not constitute a formal finding of violation. For clarity, findings requiring the Port's response are underlined while recommendations are presented in *italics*.

Section 2.1 Commercial and Industrial Facilities Oversight

Overall, the Port appeared to be effectively implementing the Commercial and Industrial provisions of the Order. However, one finding is presented below and several recommendations are provided in Section 5.1 of this report. See also the discussion at Section 3.0 of this report.

2.1.1. Need for Follow-up Inspections at Tenant Sites. Section C.8.c.ii of the Order requires the Port to conduct follow-up inspections when one of its inspections indicates that a tenant has failed to control pollution discharges to the MS4. Based upon a file review of at least one tenant (CenCal Recycling LLC), a Port inspection had indicated the need to re-inspect, but there was no indication that such a follow-up inspection had been made. The Port must ensure that it re-inspects with tenants to confirm that necessary corrective actions are taken, and, if not, to appropriately escalate its enforcement posture in accordance with the provisions of Section C.8.c.ii of the Order.

Section 2.2 Illicit Discharge Detection and Elimination

No findings or deficiencies were identified with respect to this program element. The Port appeared to be effectively implementing the illicit connections and illicit discharges provisions of the Order.

Section 2.3 Municipal Operations

2.3.1. Landscape and Recreational Facilities Management: Failure to Implement the Pesticide, Herbicide, and Fertilizer Application Protocol. Section C.9.f. of the Order requires the Port to "prepare and implement a standardized protocol for routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers" that meets the minimum specifications listed in Sections C.9.f.i. through C.9.f.viii. Pursuant to these requirements, the Port SWMP, Appendix E, Pesticide, Herbicide, and Fertilizer Application Protocol, has been developed. During the course of the audit, it was determined that the Port contracts its landscape and golf course maintenance activities to Valley Crest Companies, which maintains on-site operations housed in two locations. In addition, a tenant, Custom Spraying, is retained for periodic, nonscheduled herbicide applications on Port property. Interviews with Port Maintenance Department personnel and vendors tasked with landscape and recreational facilities management revealed that these staff had only partial knowledge of the MS4 permit requirements, and they were not knowledgeable about or aware of the Port SWMP, Appendix E, Pesticide, Herbicide, and Fertilizer Application Protocol, itself. As a result, the Port has not adequately implemented its Pesticide, Herbicide, and Fertilizer Application Protocol. The Port must fully implement a standardized protocol for routine

and nonroutine application of pesticides, herbicides, and fertilizers that meets the minimum specifications listed in Sections C.9.f.i. through C.9.f.viii., which include procedures for identification, outreach, inspection, filling, disposal, and application. Specifically, when these services are contracted to vendors, procedures need to be in implemented to effectively communicate—and require adherence to—Port-developed protocols.

2.3.2. Storm Drain Operation and Maintenance: Failure to Demonstrate Compliance with Catch Basin and Sump Cleaning Frequencies. Section C.9.g.ii of the Order, Storm Drain Operation and Maintenance, requires the Port to assign a prioritization to catch basins and sumps for cleaning purposes and to specify an inspection and cleaning schedule for removing accumulated waste based on the assigned priority. Section C.9.g.ii. of the Order also requires "record keeping of cleaning and overall quantity of waste removed." Pursuant to this requirement, the Port of Stockton Annual Work and Monitoring Plan for the 2006–2007 Permit Year (hereafter, Port Annual Work Plan 2006–2007), Section 1.2.4. Municipal Operations, states that "the Port's storm water sewer system…will be inspected…for sedimentation, trash, debris, and excessive vegetation prior to the start of the wet season. Any observations that require corrective action will be documented and will be performed by the Maintenance Department." Furthermore, the Port SWMP, Appendix F, Maintenance Procedures for Catch Basins and Sumps, states that "cleaning will occur between June 1 and September 30 each year." Documentation of these activities was available for only the 2007–2008 Permit Year and did not include records of overall quantity of waste removed as required in Section C.9.g.ii. of the Order. As a result, the Port could not demonstrate that it had met the annual inspection and cleaning schedule specified in the Port SWMP and Annual Work Plan 2006–2007 during the years prior to the 2007–2008 Permit Year, and specifically the 2006–2007 Permit Year. The Port must implement an effective and traceable recordkeeping process that allows for a determination of compliance to be made. Additionally, the Port must review its maintenance procedures and their implementation to ensure compliance with permit requirements and SWMP provisions.

2.3.3. Streets and Roads Maintenance: Failure to Designate Appropriate Sweeping Frequencies for Streets, Material Handling and Storage Areas, and Docks. Section C.9.h.i of the Order requires the Port to "designate appropriate sweeping frequencies for streets, material handling and storage areas, and docks within its jurisdiction." Pursuant to this requirement, the Port SWMP, Section 4.8, Streets and Road Maintenance, states that "the Port owns and operates a street sweeper that maintains streets, roads, material handling and storage areas, and docks as part of normal daily operations." It was observed during the audit that aside from the fertilizer warehouse area, which was swept daily, the Port Maintenance Department did not formally designate or implement established schedules or routes for sweeping streets, roadways, docks, and other municipal areas of the Port. These areas were said to be swept on an as-needed basis. This was confirmed during interviews with Port Maintenance Department personnel. Observations made throughout the audit indicated that additional street sweeping efforts appeared warranted. The Port must designate appropriate sweeping frequencies for streets, material handling and storage areas, and docks within its jurisdiction.

2.3.4. Retention Basin Operation and Maintenance: Failure to Demonstrate Compliance with East Complex Retention Basin Inspection Frequencies. Section C.9.i of the Order requires the Port to "prepare and implement guidelines for operating and maintaining retention basins within its jurisdiction." Pursuant to this requirement, the Port Annual Work Plans for the 2006–2007 and 2007–2008 Permit Years, Section 1.2.4. Municipal Operations, state that "the retention basin [East Complex Retention Basin] will be inspected by the Department of Environmental and Regulatory Affairs (ERA Department) and/or Maintenance Departments once a month during the dry season and once a week during the wet season." Based on interviews with Port ERA and Maintenance Department personnel, it did not appear that formal and documented monthly and/or weekly inspections were occurring, nor could documentation of these inspection activities be produced during the audit. As a result, the Port could not demonstrate that it had met the inspection frequencies specified in the Port Annual Work Plans during the 2006–2007 and 2007–2008 Permit Years, specifically and potentially previous years as well. Maintenance Department personnel stated that routine activities consisted of summertime weed control performed by inmates and periodic bank spraying for vegetation control.

Furthermore, Section C.9.i of the Order states that "if a retention basin inspection finds evidence of berm seepage, the Discharger shall notify the Regional Water Board within two weeks." The Port SWMP, Appendix G, Retention Basin Operations and Maintenance Guidelines, Section 2.0, Inspection, states that retention basin levees will be inspected for structural integrity during the dry season and for structural integrity and seepage during the wet season. It was observed during the audit, which was conducted during the wet season, that potential seepage from a retention basin levee was occurring along the eastern boundary of the East Complex Retention Basin adjacent to Navy Drive. The Port SWMP, Appendix G, Retention Basin Operations and Maintenance Guidelines, Section 1.0, states that "the structural integrity, operability, and volume capacity of the holding pond are vital to the effective management of storm water at the Port." Therefore, the East Complex Retention Basin must be inspected and maintained in good and effective operating condition to prevent the release of seepage along the structure's eastern boundary adjacent to Navy Drive. If a retention basin inspection finds evidence of berm seepage, the Port must notify the Regional Water Board within two weeks. Port personnel stated that they had observed the potential seepage in previous years and had informally determined it to be groundwater unrelated to the retention basin. The steps taken to reach this conclusion, however, were not well documented (or at least provided during the audit), and the Port had not informed the Regional Water Board of the occurrence of the potential seepage. <u>The Port must formally determine the source of this water and notify the Regional Water Board of its findings. Additionally, the Port must implement and document the required monthly and/or weekly inspections in accordance with its stated procedures.</u>

2.3.5. Vehicle Maintenance/Material Storage Facilities/Corporation Yards Management: Failure to Implement BMPs to Reduce Pollution Discharges. Section C.9.e. of the Order requires the Port to "implement BMPs to minimize pollution

discharges in urban runoff, including but not limited to good housekeeping practices, material storage control, vehicle leak and spill control, and illicit discharge control." The Port has four identified industrial areas that are subject to these requirements: the Vehicle and Equipment Maintenance Area; the Fertilizer Warehouses and Transfer Area; the Aboveground Tank Refueling Area; and the Equipment Wash Pad Area. The Port has also developed a draft SWPPP that identifies and evaluates sources of pollutants and site-specific BMPs to be implemented at these four locations. As part of the audit, these four Port-owned sites were inspected. Reports from each of these site inspections are attached at Attachment 1. The following is a summary of significant findings from these site inspections.

- **Vehicle and Equipment Maintenance Area -** Section 5.1.1 of the SWPPP states that the Maintenance Area is covered, however inspectors observed unknown white substances and drums which were not under cover. Also Section 7.1.2 of the SWPPP states that "the vehicle fueling and equipment wash pad areas are inspected daily by Port employees for leaks, spills and oil and grease stains" and that "Port personnel will make the necessary repairs, perform regularly scheduled maintenance or schedule a pump out of the poly-tanks as soon as possible or on an as needed basis…" However, inspectors observed a build up of oils and unknown fluids and materials outside of the bermed area.

- **Fertilizer Warehouses and Unloading Area -** Section 5.1.1 of the SWPPP states that the fertilizer transfer area is regularly cleaned with a port-owned sweeper, however inspectors observed suspended white deposits (presumably fertilizer) on most horizontal services and in crevices of equipment. Section 5.1.1 of the SWPPP further states that "storm drain outlets which are potentially impacted by contaminated stormwater are covered with two layers of plastic liner." Inspectors documented white powder surrounding an unprotected storm drain inlet. Section 5.1.3 of the SWPPP states that "various structural and non-structural BMPs are used to control dust or particles," but inspectors observed no BMPs to keep the wind from blowing the fertilizers away. Section 7.1.1 of the SWPPP states that the fertilizer warehouse and unloading area is swept when there is an accumulation of solids. It appeared to the inspectors that such sweeping had not been adequately performed for some time.

<u>The Port must implement BMPs to minimize pollution discharges in urban runoff, including but not limited to good housekeeping practices, material storage control, vehicle leak and spill control, and illicit discharge control at the Port-owned and operated facilities.</u>

Section 2.4 Construction

2.4.1. Failure to Identify and Control Construction Activities. Section C.7.a of the Order requires the Port to "implement a program to control pollution discharges from all construction sites, regardless of size, within its jurisdiction…." Prior to approving new construction with one acre or greater disturbed area, the Port must require submittal of a

Storm Water Pollution Prevention Plan (SWPPP) containing the minimum elements listed in Section C.7.a.i. of the Order. Importantly, the City of Stockton maintains permitting authority in the Port's jurisdiction but does not formally notify the Port of grading and construction permit approvals. As acknowledged by Port personnel, this practice has led to the initiation of construction without the Port's knowledge and without the ERA Department's approval for storm water compliance purposes. This is also the case for redevelopment projects conducted by existing tenants that have a lease agreement administered by the Port's Properties Management Department. Although the Port has developed a Construction Resource Kit for project proponents and also requires the submittal and approval of a SWPPP prior to commencing construction, this process can be and has been effectively bypassed. For example, Port personnel explained that the Inland Cold Storage construction site (in the East Complex at Port Road 5 and Port Road A), which consists of approximately 11 acres of disturbed area, was not identified until after construction and land-disturbing activities had commenced at the site. This appeared to be due in part to the ability of the City of Stockton to issue land use approvals without a formal mechanism in place for notification and approval by the Port. The Port must work with both the City of Stockton and the Port's own Properties Management Department to implement an adequate program to control pollution discharges from all construction sites, regardless of size, within its jurisdiction.

2.4.2. Failure to Ensure an Effective Combination of Erosion and Sediment Control BMPs at Active Construction Sites

Site: Pacific Ethanol facility located at 3028 Navy Drive in the East Complex of the Port of Stockton, CA 95203

Section C.7.a.ii of the Order requires that Port inspections of construction sites ensure that sediments generated at a project site are retained on-site and that erosion from slopes and channels is controlled by implementing an effective combination of erosion and sediment control BMPs. It was observed during the audit that BMPs were not implemented to prevent the discharge of sediment from an actively disturbed slope adjacent to a drainage channel along Navy Drive and southeast of the construction site entrance (Photograph 1). BMPs were not implemented between the slope and the adjacent drainage channel or in the disturbed drainage channel itself, and the surfaces of the slope and channel were not stabilized (Photograph 2). As a result, there was a potential for the discharge of sediment from the disturbed slope and drainage channel leading to the South Ditch and East Complex Retention Basin. In addition, BMPs had not been implemented between a large expanse of disturbed soils, a number of uncontrolled soil stockpiles, and the adjacent drainage swale (Photographs 3 and 4). Evidence of erosion, including rill formation on the slope of the drainage swale (Photograph 4), was observed. The Port Construction Site Inspector explained that the drainage swale that encompasses the site discharges through a storm drain outfall into the drainage channel along Navy Drive (Photograph 5), leading to the South Ditch, East Complex Retention Basin, and ultimately the San Joaquin River. BMPs must be installed, inspected, and maintained to prevent the discharge of sediment from the aforementioned disturbed areas of the site to the drainage channel along Navy Drive. Moreover, the Port must ensure that

sediments generated at the Pacific Ethanol project site are retained on-site and that erosion from slopes and channels is controlled by implementing an effective combination of erosion and sediment control BMPs.

Site: Central California Traction facility located on Humphreys Drive in the West Complex of the Port of Stockton, CA 95203

Section C.7.a.ii of the Order requires that Port inspections of construction sites ensure that sediments generated at a project site are retained on-site and that erosion from slopes and channels is controlled by implementing an effective combination of erosion and sediment control BMPs. It was observed during the audit that BMPs had not been implemented to prevent the discharge of sediment from a disturbed area surrounding a new railway crossing spanning an unnamed waterway north of the construction site entrance off Humphreys Drive (Photograph 6). No BMPs were present between the disturbed areas surrounding the railway crossing and the adjacent waterway (Photograph 7). Nor were run-on control BMPs implemented between the disturbed area on the southwest side of the railway crossing and the adjacent waterway (Photograph 8). Port personnel explained that the railway crossing and culverts had been installed approximately two weeks before the audit, and that the unnamed waterway flows southwest and is tributary to Burns Cutoff. BMPs must be installed, inspected, and maintained to prevent the discharge of sediment from the disturbed areas surrounding the new railway crossing to the unnamed waterway that is tributary to Burns Cutoff. Moreover, the Port must ensure that sediments generated at the Central California Traction project site are retained on-site using adequate source control and structural BMPs.

2.4.3. Failure to Adequately Enforce Legal Authority over Construction Activities. Section C.3.e of the Order requires the Port to "use enforcement mechanisms to attain compliance with the Discharger's tenant agreements." The Port's Standard Lease Agreement, Section 14.3.1, Compliance, states that the "tenant shall comply immediately with any and all directives issued by the Port Director…under authority of any laws including, but not limited to, any storm water management program implemented by the Port…" Port personnel explained that the Port has yet to exercise the full extent of its enforcement authority on a tenant for either construction or industrial activity. With respect to construction, during the audit it was observed that BMPs had not been adequately installed and maintained to prevent the discharge of sediment from the Pacific Ethanol and Central California Traction construction sites (see specifically Finding 2.4.2. above).

The auditors also observed that outstanding issues noted in past Port inspections of construction sites had not been corrected. For example, Port personnel stated in a Port Construction Site Evaluation Report dated March 14, 2008, that a mobile fueling truck was actively leaking diesel fuel at the College of Construction (in the West Complex at 290 North Hooper Street); it was apparent during the audit that this issue had not been corrected (Photograph 9). In addition, during an audit exercise to observe a Port inspection of the American Biodiesel construction site (in the West Complex at 809-C

Snedeker Ave.) on March 19, 2008, the Port inspector noted soil stockpiles improperly placed in a drainage pathway and without down-gradient BMPs. In a follow-up audit activity on March 20, 2008, it was noted that these issues had not been corrected (Photograph 10). As a result, the Port exhibited a lack of adequate private construction oversight to prevent the contribution of pollutants to storm water from the aforementioned locations. These outstanding issues and Finding 2.4.2 were considered collectively in making this determination. The Port must correct the outstanding issues and Finding 2.4.2 through prompt and effective enforcement of its tenant agreements. *Furthermore, it is strongly recommended that the Port develop and implement an Enforcement Response Plan (ERP) to establish clear direction and procedures for enforcement based on Port inspections of construction and industrial sites and other compliance activities.*

Section 2.5 Development Standards

Section C.12. of the Order required the Port to implement a Development Standards Plan and amend its tenant agreements by no later than February 17, 2006. Pursuant to this requirement, the Port of Stockton Development Standards Plan dated May 30, 2007 (hereafter, DSP) states that the DSP provisions were implemented starting on February 17, 2006. Finding 2.5.1. below disputes the stated claim that the DSP program was fully implemented.

With respect to DSP implementation, the Port has three separate organizational entities that are granted authority in the land development and construction process: Properties Management, Operations, and the ERA Departments. The Properties Management and Operations Departments serve as the initial point of contact for all land development proposals. The ERA Department plays the key role of project review and approval with respect to the DSP. It should be noted that the Port establishes tenant agreements for the use of Port properties, but it is named as the legal land owner on all construction and development projects that occur at the Port and therefore has heightened oversight obligations for these activities.

2.5.1. Failure to Identify, Review, and Condition DSP-applicable Projects. Section C.14 of the Order requires the Port to ensure that all Priority Development Projects are "reviewed and conditioned for compliance with the Development Standards." The Order defines Priority Development Projects as (a) all new development projects and (b) those redevelopment projects that create, add, or replace at least 5,000 square feet of impervious surfaces on an already-developed site that is listed under the Priority Development Project Categories in Section C. 14.a. The Port did not have a structured program to ensure that all Priority Development Projects are reviewed for DSP applicability and that subsequent project plans are adequately conditioned and implemented for compliance with the Development Standards (i.e., Section C. 14 of the Order and the Port DSP). As explained by Port personnel, the Port had identified only two projects to date that were considered to qualify as Priority Development Projects: (1) A-Plus Materials Recycling, Inc. (in the East Complex and south of Washington off Port Road 22) and (2) the Inland Cold Storage construction site (in the East Complex at Port

Road 5 and Port Road A). The A-Plus site was identified because of the addition of impervious surfaces over time and is currently being handled as a DSP project through the lease renewal process.

The Inland Cold Storage construction site is a commercial project to develop a cold storage and shipping warehouse for fish, vegetables, or other goods. In addition to the cold storage warehouse, the project will include docking and impervious parking facilities. Section C.14.a.ii of the Order defines the commercial development category as "any development on private land that is not for heavy industrial or residential uses *where the impervious land area for development [is] greater than 100,000 square feet or more* [emphasis added]." The impervious land area for development on the 11-acre Inland Cold Storage construction site is approximately 479,160 square feet. As explained by Port personnel, the Inland Cold Storage site was not identified as a Priority Development Project until after construction and land-disturbing activities had commenced at the site (see also Finding 2.4.1. above). Furthermore, Port personnel stated that once the project had been identified, it had not undergone a formally documented review for compliance with the DSP. The Port DSP, Section 3.3, Treatment Control Options for State of California Priority Categories and Port Specified Industries, states that "applicable new developments and significant redevelopments [presumably Priority Development Projects and the Port Specified Industrial Activities listed in Table 2.3.3.2 of the DSP] must incorporate into their design a properly sized treatment control measure." In contrast to this requirement, the Inland Cold Storage project was not conditioned with treatment control BMPs; the Port has only required that a sample box be installed for monitoring purposes. Using this example, it is clear that if DSP-applicable projects are not identified until construction activities have commenced, it is often far too late in the land development timeline for the Port to appropriately condition projects with DSP BMPs.

This project is a prime example of a redevelopment project that was initiated without the approval of the ERA Department for DSP compliance purposes. It is likely that the ERA Department failed to identify the Inland Cold Storage site as a Priority Development Project because of communication issues with both the Port Operations Department and the City of Stockton. Internally, the ERA Department only recently became aware that Port Operations could administer projects, such as the Inland Cold Storage site, in an area of jurisdiction north of Port Road A.

Externally, and as previously discussed, the City of Stockton maintains permitting authority in the Port's jurisdiction but does not formally notify the Port of grading and construction permit approvals. The original DSP was drafted in a manner that relied on the City of Stockton to withhold grading and construction permits until the Port had approved the project for DSP compliance purposes. Based on discussions with Port personnel, this arrangement with the City of Stockton never materialized, and the Port has not developed a structured process to ensure that projects under the dual jurisdiction of the City and the Port are reviewed and conditioned for compliance with the Port DSP. The current Port DSP, Section 2.4.3, City of Stockton Plan Check Requirement, states that "any new development or significant redevelopment that is subject to Port's development standards will also be required to be permitted through the City of Stockton

Community Development Department and Permit Center. As a part of the plan check process, the City of Stockton Permit Center will provide a *courtesy notification* [via email] to the Port of Stockton Environmental Department that they have encountered a project for a Port tenant that is applicable to the Development Standards Plan [emphasis added]." Based on this procedure, a formal mechanism has not been implemented for notification and approval by the Port for City of Stockton-permitted projects. As evidenced by the Inland Cold Storage project, the Port cannot rely on the City of Stockton's courtesy notification to ensure that that all Priority Development Projects are reviewed for DSP applicability.

Moreover, construction at the Port has been occurring during the current permit term and following the compliance date of February 17, 2006, without a structured or effective DSP applicability and plan review process in place.

Because of the limited availability of completed projects identified as Priority Development Projects by the Port, the audit team visited a number of project sites where the construction start date had occurred after the February 17, 2006, DSP compliance date. The DSP requirements in Section C.14 of the Order would appear to apply to a number of projects identified and visited during the audit that had not adhered to these DSP requirements. Examples include the following:

Site: Daggett Road Project Packages A, B, C, D, and E located in the West Complex of the Port of Stockton, CA 95203

This site was a Port-owned and -administered roadway construction and improvement project along a linear length of roadway from State Route 4 to the Navy Drive Bridge spanning the San Joaquin River. The project consisted of new roadway construction, rerouting, and widening, in addition to the construction of the Port of Stockton Expressway Bridge, a new bridge spanning Burns Cutoff. The project was developed in a series of phases or "packages" under a common plan of development over time. Packages A, B, C, D, and E are within a contiguous area connected by Daggett Road, McCloy Avenue, and Fyffe Avenue (Exhibit 1). Based on Notice to Proceed documents issued by the Port, Packages B, C, D, and E were approved and constructed after the February 17, 2006, DSP compliance date (Exhibit 2, for example). It is unclear why the Port failed to identify the Daggett Road Project as a DSP project when the A-Plus tenant site triggered the DSP requirements based on the addition of impervious surfaces over time and will likely be required to implement treatment control BMPs in accordance with the DSP (Exhibit 3).

Site: Lowe's Distribution Center located at 512/612 Luce Avenue in the West Complex of the Port of Stockton, CA 95203

The Lowe's Distribution Center is a completed commercial project consisting of a warehousing and distribution facility for home improvement goods and building and construction materials. Section C.14.a.v of the Order defines the parking lot category as "parking lots exposed to rainfall that are 5,000 square feet or more, or with 25 or more parking spaces." The site includes a newly constructed equipment maintenance (Photograph 11) and fueling (Photograph 12) shop and approximately 20 acres of

impervious parking improvements (Photographs 13 and 14). As a result, this project likely qualifies as a Priority Development Project under both the commercial and parking lot categories. Based on Port records provided during the audit, the Lowe's HIW, Inc., lease approval date (September 5, 2006) and construction start date occurred after the February 17, 2006, DSP compliance date (Exhibit 4) and therefore should have been reviewed and conditioned for compliance with the Development Standards.

Site: Ferguson Distribution Center located at 1550 Daggett Road in the West Complex of the Port of Stockton, CA 95203
The Ferguson Distribution Center is a completed commercial project consisting of a warehousing and distribution facility for pipe, plumbing, and waterworks products. Section C.14.a.v of the Order defines the parking lot category as "parking lots exposed to rainfall that are 5,000 square feet or more, or with 25 or more parking spaces." The site includes a newly constructed warehouse structure and impervious parking improvements on an approximate 58-acre site, most of which appeared to be impervious surface coverage (Photographs 15 and 16). As a result, this project likely qualifies as a Priority Development Project under both the commercial and parking lot categories. Based on Port records provided during the audit, the Ferguson Enterprises, Inc., lease approval date (August 15, 2006) and construction start date occurred after the February 17, 2006, DSP compliance date (Exhibit 4), and therefore the project should have been reviewed and conditioned for compliance with the Development Standards.

Because of the likelihood that additional projects qualify as Priority Development Projects, the Port must review all completed projects initiated since the Order effective date (October 15, 2004), as well as all current and proposed construction and development projects, for DSP applicability. The Port must develop a list of these projects, including all data necessary to determine whether the projects qualify as Priority Development Projects. The required data include but are not limited to project description at build-out, land use, impervious land area for development (square feet), area of impervious surface created or replaced (square feet), Standard Industrial Classification (SIC) code, number of parking spaces, and all other data relating to the Priority Development Project Categories specified in Section C.14 of the Order. As a component of the list, the Port must make an initial Priority Development Project Category determination regarding the need for DSP conditioning and supporting rationale.

Furthermore, the Port must ensure that all current and future Priority Development Projects are reviewed for DSP applicability and that subsequent project plans are adequately conditioned and implemented for compliance with the Development Standards. This will become increasingly imperative because of the anticipated redevelopment of the West Complex.

Section 2.6 Monitoring and Reporting Program Compliance Review

This section of the report presents findings and observations regarding the Port's Monitoring Program and its use in determining the effectiveness of the Port's MS4 program. The Port is obligated to implement the Monitoring and Reporting Program

pursuant to Order No. R5-2004-0136 (hereafter, MRP). The audit focused specifically on the Port's implementation of Sections II and III of the MRP. Compliance with MRP Section II.I., Bioassessment, was not addressed because of time constraints. For reference purposes, the MRP is organized as follows:

I. MONITORING AND REPORTING PROGRAM REQUIREMENTS
   A. Annual Monitoring Plan
   B. Annual Report
   C. Notification of Water Quality Exceedance
   D. Report of Water Quality Exceedance
   E. Certification

II. MONITORING PROGRAM
   A. Urban Runoff and Receiving Water Monitoring
   B. Urban Runoff Flow Monitoring
   C. East Complex Retention Basin Monitoring
   D. Reductions in Monitoring
   E. Upstream Source Identification Monitoring
   F. Industrial Activities Monitoring
   G. Monitoring during Loading and Unloading of Bulk Materials
   H. Urban Runoff and Water Column Toxicity Monitoring
   I. Bioassessment

III. STANDARD MONITORING PROVISIONS

2.6.1 Need for Improved Sampling and Analytical Procedures. MRP Section III.D, Monitoring and Records [40 CFR 122.41(j)(4)], states that "all sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this Order." Several discrepancies with respect to 40 CFR Part 136 procedures and analytical methods were observed during a review of chain-of-custody records, analytical results, sampling procedures, and the Port's written standard operating procedures. These discrepancies include the following:

- Grab samples were pumped into a plastic sample collection container, from which individual sample containers were filled. This procedure is not consistent with 40 CFR Part 136 sampling procedures for volatile organic compounds and oil and grease because samples for these parameters must be collected directly into an individual sample container. The required container materials are specified by parameter in 40 CFR 136.3, Table II.

- Based on a review of past monitoring data from 2006, the Port's contract laboratory was using non-approved analytical methods for the following analyses:
  - Volatile Organic Compounds - Method SW8260
  - Semi-Volatile Organics - Method SW8270
  - Organochlorine Pesticides - Method SW8081B

- Organophosphorus Pesticides - Method SW8041B
- Triazine Pesticides - Method SW8141B
- Chlorophenoxyacid Herbicides - Method SW8151A
- PCBs - Method SW8082A
- TPH Diesel - Method SW8015M

The above methods are approved for solid waste only. Current 40 CFR Part 136 test procedures can be found at http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title40/40cfr136_main_02.tpl (Exhibit 5).

- In addition, it was stated that field blank(s) for the volatile organics compounds samples were not routinely collected during sample collection. The collection of field blank(s) would be a standard component of a quality assurance program.

The Port must conduct all sampling, sample preservation, and analyses according to approved 40 CFR Part 136 test procedures. *In addition, it is recommended that a quality assurance plan be developed (or improved, if one already exists).*

2.6.2. Collection of Grab Samples. MRP Section II.A, Urban Runoff and Receiving Water Monitoring, states that "urban discharge grab samples shall be collected during the first 30 minutes of a storm event. If collection of the samples during the first 30 minutes is impracticable, grab samples can be taken as soon as practicable thereafter; however, the Discharger shall explain in its annual report why the grab samples could not be taken in the first 30 minutes." Although the Port's Annual Work Plan 2007–2008 restates the above requirements, written standard operating procedures call for grab samples to be collected in the first 60 minutes of a storm. It was stated that this is due to the time required to mobilize a sampling team following the onset of a storm event. This discrepancy was not explained in the Port's 2005–2006 or 2006–2007 Annual Reports as required. The Port must collect urban discharge grab samples during the first 30 minutes of a storm event or must explain in its annual report why the grab samples could not be taken in the first 30 minutes.

2.6.3. Collection of Composite Samples. MRP Section II.A, Urban Runoff and Receiving Water Monitoring, states that "composite sampling shall be flow weighted with ongoing sampling either for the duration of the storm, with a maximum composite period of 24 hours, or for the first three hours of discharge. Because of the inherent difficulty in fully capturing an entire storm event, the Discharger shall report the portion of the storm event during which samples were collected. Flow-weighted composite samples may be taken with a continuous sampler or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire discharge or for the first three hours of the discharge, with each aliquot being separated by a minimum period of fifteen minutes." The Port's written sampling procedures state that "composite samples will be manually collected by taking three equal aliquots during the first three hours of the storm event." Port personnel further stated that the three aliquots are to be separated by a minimum of 15 minutes. Based on review of past composite sampling records, composite samples were generally collected over a period of approximately 1 hour for each location. This practice is documented on the Port's Storm Water Data Collection

Worksheets, one of which is provided as an example (Exhibit 6). Based on information provided on the Storm Water Data Collection Worksheets, it was unclear if the pH, conductivity, and dissolved oxygen readings were representative of the composite sample or the first sample aliquot. For these reasons, the Port's composite sampling practices did not appear to be consistent with MRP Section II.A. The Port must conduct composite sampling in accordance with MRP Section II.A.

2.6.4. Failure to Collect Required Effluent and Receiving Water Toxicity Samples. MRP Section II.H, Urban Runoff and Water Column Toxicity Monitoring, states that:

> The Discharger shall conduct short-term chronic toxicity testing at each downstream receiving water monitoring station (i.e., Station ID Nos. R-2, R-4 and R-5) and at the West Complex pump station (Station ID No. WC) during two of the five years of this Order's term. These monitoring years shall not be back-to-back. Toxicity monitoring shall be conducted for the same **three storm events** for which receiving water and urban runoff are monitored.
>
> The discharger shall also conduct this toxicity testing at the East Complex Retention Basin pump station during the same years as for the above toxicity testing. Testing shall be conducted during three urban runoff discharge events per year.

As of March 18, 2008 (i.e., the start date of this MS4 Audit), the Port had collected toxicity samples from one storm event during the 2007–2008 monitoring year and had previously completed one full round of toxicity testing during the 2005–2006 monitoring year (consisting of three storm events). On each occasion, the Port had collected toxicity samples from only the receiving waters stations (Station ID Nos. R-1 through R-5) and had not collected samples at either the West Complex pump station (Station ID No. WC) or at the East Complex Retention Basin. Port personnel stated that their failure to collect the required toxicity samples at the WC and East Complex Retention Basin stations was due to a misunderstanding of the permit conditions. As a result, toxicity samples have been collected only at the downstream receiving water monitoring stations (Station ID Nos. R1–R5) (Exhibit 7). The Port must conduct short-term chronic toxicity testing at each downstream receiving water monitoring station (i.e., Station ID Nos. R-2, R-4, and R-5), at the West Complex pump station (Station ID No. WC), and at the East Complex Retention Basin pump station, in accordance with MRP Section II.H.

During the audit, on March 20, 2008, Ms. Debra Denton, USEPA Region 9 conducted a detailed review of the Port's past toxicity analyses and results. Ms. Denton's findings are presented below. It should be noted that during the audit, the Port's representatives stated that they were utilizing a new laboratory for toxicity testing and no were longer working with Block Environmental Services.

Block Environmental Services Individual Toxicity Test Reports

Upon review of the toxicity test results and reports from the Port's contract laboratory, Block Environmental Services (BES), numerous laboratory deficiencies were identified. These include: (1) lack of clarity in the application of test method, (2) lack of maintaining sample integrity (i.e., sample temperatures exceeded), (3) lack of test method performance (i.e., invalid test results), (4) inadequate data review and clearer statistical analysis, and (5) inadequate TIE analysis. Each finding is further described below.

2.6.5. Lack of Clarity in the Application of Toxicity Test Methods. It is not apparent as to whether the laboratory conducted the USEPA methods according to either the USEPA (1994) or the more recent promulgated methods (USEPA 2002). The methods to be followed should be the more recent USEPA 2002 procedures and the Order should include this level of specificity as a point of clarification. The BES report refers to both test method manuals. For example, under discussion of test procedures, the BES report highlights that the lab follows the detailed procedure as outlined in their standard operating procedures according to the USEPA (1994), whereas under data analysis the report highlights USEPA (2002).

2.6.6. Lack of Maintaining Sample Integrity. As specified in the MRP, "All sample collection and analysis shall follow standard USEPA protocols." Examination of the chain of custody (COC) showed that the sample temperatures were logged as exceeding the range of 0-6 °C for reports dated, February 8, April 6, and April 14, 2006. According to EPA toxicity testing methods, samples collected for off-site toxicity testing are to be chilled to 0–6 °C during or immediately after collection, and shipped on ice to the performing laboratory (USEPA 2002, page 32). The collection and handling of samples are to be reviewed to verify that the sampling and handling procedures (see Section 8 of the test method manuals) were followed. COC forms are reviewed to verify that samples were tested within allowable sample holding times. Any deviations from the procedures given in Section 8 of the test method manuals should be documented and described in the data report. Block Environmental Services should have contacted the Port upon receipt of the samples to inform the Port that the samples exceeded the specified ranges to rectify this issue for all future samples. The Port must collect representative samples and maintain the integrity of those samples from time of collection to receipt at the lab. This includes placing samples on ice upon sample collection and recording collection temperature on the COC form.

2.6.7. Invalid Test Results. Of paramount concern is the fact that the laboratory failed to meet the required test acceptability criteria (TAC) as required by USEPA methods (1994, 2002). In fact, the laboratory had a control of 30% survival, and the concurrent reference toxicant was not typical of in-house sensitivity (report dated April 6, 2006). The test method requires a minimum of 80 or greater percent survival to be achieved in the control. Under testing notes (April 6, 2006 report) the laboratory states "potential significant reductions in reproduction were not identified as significant due to the inadequate performance of the control waters". The laboratory should have immediately informed the Port of the failed TAC and next steps to be initiated. The provided test results are invalid and not useable. Unfortunately, this information cannot be recaptured, unlike a continuous discharge where a sample can be collected again and a test repeated

within two weeks. A February 8, 2006 report (under testing notes), states "the R-1 and R-3 control waters did not meet any of the tests acceptability criteria." Therefore, these samples collected for the January 2006 timeframe are not useable to ascertain whether or not toxicity occurred with the test species, *Ceriodaphnia dubia* at R-1 and R-3.

2.6.8. Inadequate Data Review and Statistical Analysis. BES states in the report "PMSD's for the reproduction endpoint for R-2, R-4 and R-5 samples fall outside of the EPA upper limit of 47." The percent minimum significant difference (PMSD) for the *Ceriodaphnia dubia* reproduction for all samples exceeded the EPA upper bound value according to USEPA 2002. Therefore, according to USEPA 2002 excess of within-test variability (measured via PMSD) may invalidate the test result and warrant retesting. For evaluating within-test variability, the test reviewer should consult EPA guidance on upper and lower PMSD bounds (USEPA 2000). Test review is an important part of an overall quality assurance program (see QA/QC chapter in the test methods manual). The chapter on "Report preparation and test review", USEPA (2002) states, "test review should be conducted on each test by both the testing laboratory and the regulatory authority." It is necessary to ensure that all test results are reported accurately. The components of test review include: (1) review of sample handling and collection, (2) review of test acceptability criteria, (3) review of test conditions, (4) review of concentration-response relationships, (5) review of reference toxicant tests, and (6) review of test variability (i.e., examination of PMSD values). *Therefore, the Port should review the individual toxicity test results to ensure that the testing lab has provided a complete test review.*

Often in stormwater toxicity testing design, a laboratory control and a single concentration (e.g., 100% stormwater) is tested. In these pass/fail tests, the objective is to determine if the survival in the single treatment (e.g., stormwater) is significantly different from the control survival. In this testing design the determination of pass or fail from a single aqueous concentration is ascertained with a standard t-test (USEPA 2002a, see figure 12 of the acute toxicity "Data analysis section" or in the chronic test method manuals, the appendix on "Single-concentration toxicity test - comparison of control with 100% effluent or receiving water"). Therefore, the Port and testing labs should be utilizing this approach for storm water testing analysis. Then, if a sample has at least 50% mortality in undiluted sample at any time during the duration of the tests a TIE is required according to the Order. See suggested permit language in Section 6.4.6 of this report for further clarification regarding steps to address toxicity.

2.6.9. Inadequate TIE Analysis. The BES report states *Ceriodaphnia dubia* survival rate was reduced 50% when exposed to sample R-5, which was sufficient, under the terms of the Order to trigger a toxicity identification evaluation (TIE). As indicated in the report (dated February 14, 2006), it states, "the initial step in a Phase 1 TIE is to determine if the observed toxicity degrades over time." Thus it is not clear as to whether a full characterization Phase 1 TIE was performed following standard EPA procedures (USEPA 1991). For storm water toxicity testing when a sample is identified as toxic according to the Order, then a Phase I TIE needs to be initiated as soon as possible to identify the toxicant(s). The first step in a Phase I TIE is not just "to determine if the observed toxicity degrades over time." It is surprising with survival being reduced to 50%

mortality, that the lab did not begin a TIE immediately to ascertain the causes of toxicity. The Port must begin a Phase 1 TIE immediately on all samples that are toxic to either species as specified in the Order.

2.6.10. Inadequate Interpretation and Reporting of Toxicity Test Results. The Port's interpretation of the BES individual toxicity results, as reported in Section 3.1.7 of the Port of Stockton Annual Municipal Stormwater Report, dated July 1, 2005 - June 30, 2006, is inadequate. For example, the Port's findings for April 2006, "the BES report stated in the conclusions, *Ceriodaphnia dubia* survival and reproduction were not adversely affected when compared to the R-1 control water." Whereas, the BES report states, under testing notes (April 2006 report) the laboratory states "potential significant reductions in reproduction were not identified as significant due to the inadequate performance of the control waters." Additionally, the TIE Phase I evaluations were not complete Phase I studies. It appears that the laboratory only examined samples to determine whether toxicity was still observed. See Denton, Miller, Stuber (2007) which describes EPA TIE manipulations and procedures. The Phase I TIE manipulations are designed to sequester or remove toxicity caused by specific classes of chemicals (e.g, particle bound toxicants, cationic metals, ammonia, etc). This is shown in Table 5-1 of the reference document Denton, Miller, Stuber (2007). *The Port should review the chapter on "Report preparation and test review" (USEPA 2002) as the test review step should be conducted on each test by both the testing laboratory and the regulatory authority. This is necessary to ensure that all test results are reported accurately.*

Section 3.0 Summary of Port Tenant Inspections

This section of the report presents a summary of the tenant inspections and observations regarding the Port's oversight of tenant activities.

As part of the audit, USEPA Region 9 and Regional Water Board staff conducted 26 individual inspections of tenants located on the Port's property. Twenty two (22) of these tenants had filed a NOI for coverage under the General Permit. One tenant was regulated by an individual NPDES permit issued by the Regional Water Board; the remaining three tenants are, at present, regulated solely under provisions contained in their lease agreements with the Port. The purposes of the tenant inspections were to: (1) assess the adequacy, appropriateness, and maintenance of BMPs employed by tenants to minimize storm water contamination; and (2) gauge the overall effectiveness of the Port's commercial and industrial oversight program.

These inspections indicated that, with certain exceptions, inspected facilities were knowledgeable about applicable General Permit requirements, demonstrated acceptable site conditions and BMP implementation, and had paperwork in acceptable order. The exceptions noted above and the need for facility-specific remedies will be separately communicated to the individual facilities (with copies to the Port) via transmittal of facility inspection reports.

As discussed at Section 2.1 above, the audit indicated no violations of the current Commercial and Industrial Facilities Oversight element of the Port's Order. However, based upon the tenant inspections, the audit team believes that improvements can be made to the Port's implementation of this program element. These recommendations are presented in Section 5 of this report.

Section 4.0 TMDL Preparedness and Program Effectiveness

This section presents an analysis of the Port's preparedness and planning for current and future Total Maximum Daily Load (TMDL) requirements and Waste Load Allocations (WLAs). Specific goals of the analysis were (1) to assess whether the monitoring program, as currently structured and implemented, is of sufficient benefit in gathering the data necessary to support the development of TMDLs planned for the Stockton Deep Water Channel and San Joaquin River, and (2) to evaluate how the Port is using its respective monitoring programs to evaluate the overall effectiveness of its MS4 program, as well other activities that the Port may be engaged in beyond what is required of it under the NPDES permit.

Under Section 303(d) of the CWA, the Stockton Deep Water Channel (dioxin, furans, and PCBs), and San Joaquin River (boron, chlorpyrifos, DDT, diazinon, electrical conductivity, Group A pesticides, selenium, mercury, and unknown toxicity) are listed as water quality impaired by the pollutants shown in parentheses. In addition, low dissolved oxygen causes impairment in the river from Channel Point to Disappointment Slough and pathogens impair surface waters near the Port of Stockton Turning Basin. The Regional Water Board is currently addressing pollution in the 303(d) listed water bodies by developing TMDLs for the Stockton Deep Water Channel and San Joaquin River over the next decade. As of April 2008, the following TMDLs had been approved and adopted:

- On October 21, 2005, the Regional Water Board adopted the Basin Plan Amendment for the Control of Diazinon and Chlorpyrifos Runoff into the Lower San Joaquin River. It has been approved by the State Water Resources Control Board and the Office of Administrative Law. Final approval by EPA was received on December 20, 2006. Information regarding the TMDL can be obtained at http://www.swrcb.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/san_joaquin_op_pesticide/index.shtml

- The San Joaquin River Dissolved Oxygen (DO) TMDL was adopted and approved on February 27, 2007. Information regarding the TMDL can be obtained at http://www.swrcb.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/san_joaquin_oxygen/index.shtml

- On March 14, 2008, the Regional Water Board adopted Resolution No. R5-2008-0030, approving the Total Maximum Daily Loads of Pathogens in Stockton Urban Waterbodies, San Joaquin County. The TMDL addresses pathogen impairment in Five Mile Slough, Lower Calaveras River, Mormon Slough, Mosher Slough, Smith Canal, and Walker Slough. While implementation of this TMDL is conducted through the City of Stockton's MS4 Permit (Order No. R5-2007-0173) and associated Pathogen Plan, the Port should follow the City's progress and the effectiveness of targeted BMPs.

At the time of the audit, the Port had several activities underway in support of the San Joaquin River Dissolved Oxygen TMDL. Pilot-level aeration systems were installed at two locations on Port property; one within the San Joaquin River and a second in the Deep Ship Channel. Increased sweeping schedules (e.g., three times per day) were deployed at the fertilizer transfer and warehouse location. Plans were in place to install Contech Storm Water Vortex / Filtration Units for D2, D4, and D11 discharge locations and conceptual plans existed for transforming the South Ditch waterway on the East Complex into a biofilter. Additionally, the Port was monitoring DO levels in the receiving waters as a component of their overall monitoring program.

Port personnel were also aware of the adopted Basin Plan Amendment for the Control of Diazinon and Chlorpyrifos Runoff into the Lower San Joaquin River, however targeted activities and/or participation was limited. Based on a review of past monitoring data, the Port was monitoring for these parameters at select discharge locations and in the receiving waters.

In summary, the Port appeared well informed with the ongoing TMDL process and possessed the capabilities to monitor and assess contributions and potential impacts from Port discharges and receiving water quality. *The Port is encouraged to actively follow and participate in the TMDL process and engage with the Regional Water Board and other stakeholders when determining expectations, implementation routes and the need for and type of targeted BMPs.*

An assessment of the Port's procedures and methods to measure storm water program effectiveness was limited due to time constraints. Therefore, a comprehensive and detailed assessment of the Port's program in comparison to the requirements contained in Order provision C.17 was not performed. However, Port personnel described and demonstrated their intent to measure program effectiveness with the use of indirect measurements (i.e., number of completed inspections) and direct measurements of monitoring data from discharges and the receiving waters. As part of this process, Port personnel provided the audit team with a PowerPoint presentation that highlighted program accomplishments. This presentation shows apparent tangible improvement in both discharge and receiving water quality (Exhibit 8) based on a reduction in the number of benchmark exceedances. Based on this limited review, it appeared that the Port had a solid procedure in place to measure program effectiveness. Importantly, and notwithstanding the monitoring deficiencies identified in Section 2.6 of this report, the Port was amassing the quantity of data needed to measure water quality improvement over time and to measure the effectiveness of select BMPs.

Section 5.0 Recommendations for Improved Storm Water Management at and by the Port

This section of the report provides recommendations for how the Port might improve the design and implementation of its current Stormwater Management Programs. This section also includes identified program deficiencies that represent areas of concern for successful program implementation. Although these deficiencies likely do not constitute noncompliance, failure to attend to these findings could lead to noncompliance in the future.

Section 5.1 Industrial and Commercial Facilities Oversight

5.1.1. Inability to Demonstrate Compliance with Inspection and Business Outreach Frequencies. Section C.8.b of the Order states:

> The Discharger shall inspect and conduct business outreach at commercial/industrial facilities **once per year** beginning **1 July 2005**. The Discharger need not perform additional inspections and outreach at commercial/industrial facilities that it has determined to have no pollution exposure to storm water, and no potential for unauthorized non-storm water discharges; however, the Discharger shall continue to track these facilities, noting in its inventory the determination to discontinue inspections and outreach. The Discharger shall not halt inspections at any facilities covered under the General Industrial Permit.

While the Port maintained records of all past inspections in binders, it could not efficiently demonstrate that it was meeting the required inspection frequencies on a year-to-year basis. This deficiency appeared to be at least due in part to the data management practices employed and the fact that the spreadsheet used for tracking inspections contained only the date of the last inspection. Consequently, the tracking sheet did not provide evidence that inspections were conducted at the required frequencies for past years. Furthermore, the tracking sheet used by the Port did not differentiate between those tenants requiring annual inspection and those determined to have no pollution exposure to storm water and no potential for unauthorized non-storm water discharges. It was therefore very difficult to determine the required inspection and/or outreach frequency for each tenant (or group of tenants). *It is recommended that the Port substantially improve the industrial and commercial tenant tracking system. The Port should more clearly differentiate between the designated tenant groups and maintain the rationale used to identify those tenants that have no pollution exposure to storm water and no potential for unauthorized non-storm water discharges.*

5.1.2. Need for Improved Identification of Tenants Requiring General Industrial Permit Coverage. Section C.8.a of the Order requires the Port to develop an inventory of businesses and industries currently operating at the Port, including (a) whether the site is covered under the General Permit and (b) a narrative description of business activities and the SIC code that best reflects the type of business. Through this requirement, it is

intended (although not specifically called for) that the Port will identify potential non-filer industrial businesses in its jurisdiction. Although the Port had attempted to identify General Industrial Permit holders and collect SIC and business information, it had not specifically attempted to identify non-filers. Two potential non-filers were readily identified during the audit: Door Fabrication Services, Inc. (SIC code 2431), in Buildings 810 and 811 at the West Complex, and Royal White Cement, Inc. (SIC code 3421) in Building 610 at the West Complex. It is believed that additional non-filers could be identified through additional efforts. *Though not specifically required in the Order, it is recommended that the Port identify and report the presence of non-filers to the Regional Water Board because doing so will provide a more level regulatory approach (i.e, playing field) for all tenants and might also lessen the burden of the Port itself in ensuring that respective businesses adhere to applicable storm water requirements. Therefore, the Port should re-evaluate the universe of tenants for General Industrial Permit applicability.*

5.1.3. Need for Appropriate Follow-up to Identified Exceedances of Parameter Benchmark Values. EPA has developed a set of parameter benchmarks values (PBVs), based primarily upon water quality criteria, to measure the adequacy of a Port's storm water controls. (See the 2000 reissuance of EPA's Storm Water Multi-Sector General Permit for Industrial Activities (MSGP 2000), http://www.epa.gov/npdes/pubs/msgp2000-final.pdf, pp. 64766-64767.) Exceedances of PBVs are intended to alert permit-holders to the need to improve BMPs. Reviews of several tenants' annual reports for monitoring years 2005-2006, and 2006-2007 indicated exceedances of established PBVs for various constituents, and the Port has reported some of this information in its past Annual Reports (e.g. at Table 2.2). However, there is no indication from the Port's inspections of its tenants under Part C.8.b and C.8.c.ii that the Port works with the tenants in such instances to evaluate existing BMP effectiveness. *The Port should follow-up with its tenants when monitoring results indicate PBV exceedances and the possible need to modify BMPs in order to reduce indicated loadings.*

5.1.4. Potential Consultant Conflict of Interest. Under Section C.8.b of the Order the Port is required to conduct tenant inspections for compliance with lease agreements. This section also requires the Port to undertake appropriate progressive enforcement against tenants that have failed to control pollutant discharges to its MS4. The Port's environmental consultant WGR Southwest, Inc., both conducts the inspections on the Port's behalf while at the same time providing consulting services to a number of tenant facilities. Although the audit team found no evidence of this occurring, there is at least the potential for a conflict of interest for WGR Southwest, Inc. to be caught between divergent and conflicting interests of its various clients. *The Port should therefore consider evaluating this potential and undertake appropriate corrective action.*

Section 5.2 Illicit Discharge Detection and Elimination

No recommendations or deficiencies were identified for this program element.

Section 5.3 Municipal Operations

5.3.1. Opportunity for Improved Municipal Operations. Section C.9 of the Order requires the Port to implement a Municipal Operations Program to prevent or reduce pollutants in runoff from all of its land use area, facilities, and activities. Many municipal storm water permits include a requirement that the Discharger develop and deploy SWPPPs for its fixed facilities (e.g., maintenance shops, golf course, buildings) and develop and implement BMPs for municipal activities (e.g., minor roadway maintenance; curb, gutter, and sidewalk repair; underground utility repair and replacement). *It is recommended that the Port evaluate the entire universe of Port-owned and -operated facilities and include additional facilities in its Municipal Operations Program, such as the golf course, parking facilities, and other appropriate Port-owned and -operated locations. In addition, it appeared that the Port Maintenance and ERA Departments would benefit from identifying activities that have the potential to contaminate storm water runoff and developing corresponding SWPPPs and BMPs. Overall, enhanced integration of the Maintenance Department and vendors in the storm water program appeared warranted.*

Section 5.4 Construction

5.4.1. Establishing Expectations for Construction BMPs. Many municipal storm water permits include a requirement that the Discharger designate a set of minimum BMPs (e.g., design criteria and adequate installation and maintenance specifications) and implement, or require the implementation of, the designated minimum BMPs at each construction site within its jurisdiction. This is not a requirement of the current permit. Nonetheless, to address this issue, the Port usually refers project proponents to the *California Stormwater BMP Handbook for Construction* (hereafter, California BMP Handbook). As described by Port personnel, however, the Port does not specifically require the use of the California BMP Handbook and instead hands out individual detail sheets when deficiencies are observed on-site. The auditors observed that BMPs had not been adequately installed and maintained to prevent the contribution of pollutants to storm water at several sites visited, and believed these observations might be partially attributed to the lack of a unified set of minimum BMPs and subsequent implementation.

Formal adoption of minimum BMP standards would provide a more enforceable basis to the Port staff in making inspection determinations; it would also alleviate the burden of providing compliance assistance in an ad hoc manner. Ultimately, adoption of minimum BMP standards might help to deliver a clear message to the development community regarding the Port's expectations for BMP implementation. For these reasons, *it is strongly recommended that the Port formally designate an adequate set of minimum BMPs and ensure their implementation at each construction site within its jurisdiction.*

5.4.2. Opportunity for Education of Heavy Equipment Operators on Construction BMPs. *It is recommended that the Port explore opportunities to partner with the College of Construction (in the West Complex at 290 North Hooper Street) and educate heavy*

equipment and construction site operators on erosion control grading techniques and overall storm water quality practices as part of the curriculum. Because of the ongoing nature of the land-disturbing activities at this site, more permanent structural controls could be implemented and the site conditions could be improved to showcase the facility for model practices.

Section 5.5 Development Standards

5.5.1. Need for a Project-specific DSP Process. The Port of Stockton Development Standards Plan is analogous to a "standard" SUSMP manual. Although the DSP describes procedures and encourages appropriate BMP selection, it does not require the project proponent to develop and submit for review a specific stand-alone DSP document that describes the anticipated temporary and permanent storm water controls and the rationale for their selection. Rather, the project proponent is allowed to incorporate the DSP elements into other plan sets. Many other MS4s commonly require project-specific DSPs as a means to facilitate compliance with the DSP requirements. *It is strongly recommended that the Port consider requiring project proponents to develop and submit a project-specific DSP that will then be reviewed by ERA Department staff.*

5.5.2. Need to Implement a Process for Ensuring Ongoing Maintenance of Post-Construction BMPs. At the time of the audit, treatment control BMPs had not yet been implemented for DSP purposes and therefore provisions for ongoing maintenance had not been deployed or evaluated for effectiveness. Consequently, the Port is in an opportune position to improve on its current requirements associated with the DSP maintenance agreement. The Port currently lacks a formal system to inventory the specific locations of DSP BMPs, the corresponding maintenance obligations, and records that demonstrate that maintenance has been performed. Without such an inventory, the Port will not be able to ensure adequate long-term maintenance of the BMPs. *The Port should develop a formal system to track the deployment, ownership, and maintenance history of DSP BMPs to ensure adequate long-term maintenance of the practices.* This will become increasingly imperative because of the anticipated redevelopment of the West Complex and DSP-applicable projects.

Section 5.6 Monitoring

5.6.1. Definition of a Qualifying Storm Event Restricts Monitoring Activities. MRP Section II.A, Urban Runoff and Receiving Water Monitoring, states that:

> Monitoring shall be conducted at the stations listed above [Table in MRP Section II.A.] for **three storm events per year**[1]. The Discharger shall target for monitoring the first significant[2] storm event of the year preceded by 30 days of dry weather. The other two monitored storm events shall be

[1] This refers to the permit year of July 1 to June 30.

[2] A significant storm event is one that produces a continuous discharge of storm water for an hour or more.

> significant, representative[3], and preceded by at least three days of dry weather. Each monitoring event shall be separated by at least 20 days.

The *Port of Stockton Annual Municipal Storm Water Report for the 2005–2006 Permit Year* (hereafter, Port Annual Report 2005–2006), Section 3.1.1, Direct Discharge Monitoring, defines a qualifying event as follows:

Qualifying Storm Event

- Produces enough rainfall to generate sufficient runoff to be able to collect a sample
- Is preceded by at least 3 days of dry weather
- Occurs during normal daylight business hours defined as Monday–Friday, sunrise to sunset, excluding holidays
- Is separated by 10 days in between sampling events (changed from 20 days to 10 days by the Regional Board prior to the start of the 2005/2006 storm season)
- According to discussions with the Regional Board staff, unless a receiving water sample can be collected, the analytical data obtained from the direct discharge sampling is of little importance. Therefore, since receiving water samples must be collected 2 to 6 hours after the commencement of discharge, direct discharge samples are not collected if there is not ample daylight to allow the collection of receiving waters. (In practical terms, this means that the Port usually will not begin to sample a storm event after 3:00 PM.)

Criteria for a qualifying storm event included in the Order and in the Port's own procedures (e.g., Port Annual Report 2005–2006) appear to unnecessarily limit the number of qualifying storm events. As a result, only one storm event had been monitored in the 2007–2008 Permit Year. In addition, the auditors could not determine whether the Port has monitored the first significant storm event of the current year. *The Port should work with the Regional Water Board to modify the current procedures to ensure that at least three wet weather sampling events are conducted each year.*

5.6.2. Acquisition and Use of Flow Data. MRP Section II.A, Urban Runoff and Receiving Water Monitoring, states that "the Discharger shall collect flow data at the time of sampling for applicable monitoring stations. Receiving water or urban discharge flow may be estimated using USEPA methods at sites where flow measurement devices are not in place." Furthermore, MRP Section II.B, Urban Runoff Flow Monitoring, requires the following:

> The Discharger shall take the following actions to better estimate urban runoff discharge flows from the Port of Stockton:

[3] "Representative" means the depth and duration of the event should not vary by more than 50 percent from the average depth and duration.

1. The Discharger shall install a flow meter at the West Complex pump station, which discharges to the Burns Cutoff. The flow meter shall be installed and functional by **1 November 2004**.
2. The Discharger shall install a flow meter at the East Complex Retention Basin pump station as soon as practicable.

The Port Maintenance Department installed flow monitoring devices at both pump stations by 2005. The East Complex flow meter was used to calculate the pollutant loadings reported in the Port Annual Report 2005–2006. In contrast to the pollutant loadings reported for the East Complex, in regard to the West Complex the Port Annual Report 2005–2006 states:

> The flow meter at the West Complex was installed in June 2005. However, it was discovered that a significant amount of the discharge is from groundwater that occurs naturally in the West Complex sloughs. The Port is evaluating how to accurately measure or estimate the storm water flow and the percentage of groundwater in the total discharge from the West Complex, which is complicated by the fact that both are seasonally variable. Therefore, no storm water pollutant load calculations were able to be obtained for the West Complex discharges.

A remedy for this issue was not presented during the audit. The Port's contractor, WGR Southwest, Inc., which is tasked with sample collection and preparation of the annual reports, did not appear to have direct access to the flow meters or the resulting data. In the case of the West Complex, whether a record of discharges was maintained was unclear. Discharges presumably occur as the result of storm events but are also somewhat influenced by groundwater intrusion. Therefore, unlike the East Complex, where the total volume of the discharge is measured, discharge volume from the West Complex is not currently tracked or reported. At a minimum, improved communication and coordination between the Port ERA Department (and its consultant) and the Maintenance Department is advised. *Ultimately, a more accurate and reliable method for measuring (or estimating) flow volume from the West Complex is strongly recommended.*

5.6.3. West Complex (Station ID No. WC) Monitoring Location. MRP Section III.A, Standard Monitoring Provisions, requires that "samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity." Whether the current West Complex (Station ID No. WC) monitoring location and associated sampling procedures allow for the collection of samples that are representative of the quality of the discharge to Burns Cutoff was unclear. Under the Port's current practice, grab and composite samples are collected immediately upstream of the West Complex pump station during the onset of a qualifying storm event. Samples are collected regardless of whether the West Complex pumps are operating and discharge is occurring. Furthermore, as previously stated in this report, the West Complex ditch contains water at all times of the year and is significantly influenced by groundwater, some of which is known to be contaminated by past Navy activities. Also, there is presumably a lag time between the onset of precipitation and flows reaching the sample location. For these reasons the audit team could not determine whether the collected samples are indicative of the discharge

quality or the runoff quality or whether they are an adequate measure of BMP effectiveness. *For these reasons, it is recommended that the Port evaluate (or substantiate) the current sampling location and procedures at the West Complex station. It is likely that additional upstream locations would be more representative of runoff quality and the effectiveness of BMPs.*

5.6.4. Urban Runoff Monitoring Locations Discrepancy. MRP Section II.A, Urban Runoff and Receiving Water Monitoring, states that the Discharger must monitor the following stations as part of direct discharge monitoring:

Station ID No.	Drainage Description or Location
East Complex Runoff	
D-4	Docks 2–7; drainage to a discharge pipe
D-7	Area east of Slip 8; bulk cement and loading areas; drainage to a discharge pipe
D-8	Slip 8 loading dock; drainage to a discharge pipe
D-10	Dock 8 and area along Road 5 and Road C; drainage to a discharge pipe
D-11	Docks 9–11 and area around bulk fertilizer Warehouses; drainage to a discharge pipe
D-15	Shop and office area; drainage to a discharge pipe
Retention Basin Inlet (RBI)	Southern two-thirds of property, south of Road H
West Complex Runoff	
West Complex Pump Station (WC)	Southwest corner of island; discharges to Burns Cutoff

Station ID No. D2, located in the northeast portion of the East Complex and discharging into the turning basin of the Deep Water Ship Channel, is not included in the Order; however, the Port has been actively sampling this location since prior to 2004. Conversely, the Port has undertaken storm drain rerouting activities that have resulted in termination of Station ID Nos. D7, D8, D10, and D15. Therefore, the Port has discontinued sampling activities at these locations. MRP Section III.L, Standard Monitoring Provisions, states that "the Executive Officer or the Regional Board, consistent with 40 CFR 122.41, may approve changes to the Monitoring Program [MRP Section II.], after providing the opportunity for public comment…." How, or if, the Port had communicated these Monitoring Program changes to the Regional Water Board and whether the changes had been approved were unclear. *The Port and the Regional Water Board should evaluate the range and extent of past and planned modifications to the monitoring program to determine the applicability of the MRP Section III.L provision.*

Section 6.0 Recommendations for Future Order Modifications

This section of the report presents recommended improvements to the current MS4 Order. These recommendations would apply to the development of the next-term MS4 Order, unless otherwise noted.

Section 6.1 Industrial and Commercial Facilities Oversight

6.1.1. Improved Specification for Required Frequencies for Inspection and Business Outreach. The Order should require clear differentiation between the designated tenant groups and maintain the rationale used to identify those tenants that have no pollution exposure to storm water and no potential for unauthorized non-storm water discharges and required frequencies for each.

6.1.2. Clarification Regarding Desire to Identify Non-Filers. If the Regional Water Board intends for the Port to identify and report non-filers, that should be clearly stated in the Order. A corresponding procedure that requires a frequency of determination and a process for reporting should be established.

6.1.3. Additional BMPs for Marine Cargo Handling Facilities. Pursuant to EPA's storm water regulations [40 CFR 122.26(b)(14)(viii)] and the General Permit, industrial activities at Marine Cargo Handling facilities (SIC 4491) subject to the storm water NPDES requirements are limited to those portions of the facility that are either involved in vehicle maintenance or equipment cleaning operations. Although other areas at such facilities (e.g. where vessel loading and unloading activities occur and where there may be spillage of materials) exhibit the potential to contaminate storm water, such areas are unregulated under the General Permit. The Regional Board should consider requiring the Port to develop and ensure the implementation of appropriate minimum BMPs to be employed by its tenant Marine Cargo Handling facilities at these "other" areas.[4]

Section 6.2 Construction

6.2.1. Expectation for Source Identification of Construction Sites Misinterpreted. Section C.7 of the Order requires the Port to develop the Construction Element of its SWMP to *address source identification* and accordingly to "implement a program to control pollution discharges from all construction sites, regardless of size, within its jurisdiction." The Port SWMP, Section 2.2, Source Identification, states that "each construction project proponent will be required to identify in the SWPPP sources of contamination related to the construction activities." The Port clearly misinterpreted the source identification requirement of the Order. It is recommended that the Regional Water Board specify that the Port must develop and maintain an inventory of all construction sites within its jurisdiction regardless of site size or ownership.

[4] This narrow definition of "industrial activities" applies as well to all other transportation sector facilities regulated under "category viii" of the EPA's storm water regulations and the General Permit.

6.2.2. Minimum Set of BMPs for Construction. Many municipal storm water Orders include a requirement that the Discharger designate a set of minimum BMPs (e.g., design criteria and adequate installation and maintenance specifications) and implement, or require the implementation of, the designated minimum BMPs at each construction site within its jurisdiction. The Port does not have such standards and instead refers project proponents to the *California Stormwater BMP Handbook for Construction*. Formal adoption of minimum BMP standards (e.g., California BMP Handbook, self-developed standards, or otherwise) would provide a more enforceable basis to the Port staff in making inspection determinations; it would also alleviate the burden of providing compliance assistance in an ad hoc manner. The Regional Water Board should consider requiring the Port to develop or designate an adequate set of minimum BMPs and ensure their implementation at each construction site within its jurisdiction.

Section 6.3 Development Standards

6.3.1. Need for a Project-specific DSP Process. The Port of Stockton Development Standards Plan is analogous to a "standard" SUSMP manual. Although the DSP describes procedures and encourages appropriate BMP selection, it does not require the project proponent to develop and submit for review a specific stand-alone DSP document that describes the anticipated temporary and permanent storm water controls and the rationale for their selection. Rather, the project proponent is allowed to incorporate the DSP elements into other plan sets. Many other MS4s commonly require project-specific DSPs as a means to facilitate compliance with the DSP requirements. *It is strongly recommended that the Port consider requiring project proponents to develop and submit a project-specific DSP that will then be reviewed by ERA Department staff.*

6.3.2. Requirements for Ensuring Ongoing Maintenance of Post-Construction BMPs. This provision is not currently in the Order and should be included in future versions. The Port should develop a formal system to track the deployment, ownership, and maintenance history of DSP BMPs to ensure adequate long-term maintenance of the BMPs. This will become increasingly imperative because of the anticipated redevelopment of the West Complex and DSP-applicable projects.

Section 6.4 Monitoring

6.4.1. Improved Monitoring Program. It is recommended that the Regional Water Board consider adding additional upstream monitoring stations on the West Complex to measure the effectiveness of BMPs and to minimize or eliminate the effects of groundwater contributions. In addition, the Regional Water Board should consider requiring that samples be collected during active discharge (i.e., when pumps are running) at the West Complex pump station (Station ID No. WC).

6.4.2. Urban Runoff Monitoring Locations Discrepancy. It is recommended that the Regional Water Board consider updating the list of monitoring stations in MRP Section

II.A (i.e., to include Station ID No. D-2 and remove Station ID Nos. D-7, D-8, D10, and D-15).

6.4.3. Urban Runoff Flow Monitoring. It is recommended that the Regional Water Board reevaluate the need and purpose for flow monitoring in MRP Section II.B. Clarity is needed as to which stations are to be monitored, how the resulting flow data are to be used, and how the data are to be reported.

6.4.4. Definition of a Qualifying Storm Event Restricts Monitoring Activities. It is recommended that the Regional Water Board consider some relaxation of the qualifying storm event criteria specified in MRP Section II.A and instead require that more samples be collected. In addition, the Regional Water Board should consider establishing a more clear connection between the sample locations and the intended uses of sampling data. For example, Station ID Nos. D-2 through D-15, and possibly new stations on the East and West Complex, could potentially be used to measure the effectiveness of BMPs. Station ID Nos. RBI and WC could potentially be used to measure contributions and loadings from the Port to the receiving water.

6.4.5. Hydraulic Modeling. It is recommended that the Regional Water Board consider requiring hydraulic modeling to quantify the relative proportions of runoff from Station ID Nos. D4 through D15, RBI, and WC and from groundwater. The modeling would allow for enhanced load estimations, presumptive BMP modeling, and supplement current and future TMDL WLA development and compliance monitoring.

6.4.6. Toxicity Testing. The Port of Stockton Order (see section II.H of the Monitoring and Reporting Program – "Urban Runoff and Water Column Toxicity Monitoring") should provide detailed language on test species/method with citation (i.e., USEPA 2002), quality assurance and quality control measures, and steps to address toxicity. For example, the Order should provide quality assurance details such as, "If either the reference toxicant or effluent toxicity tests do not meet all test acceptability criteria as required in the test methods manual, then the Port must resample and retest within 14 days or soonest stormwater event." EPA has developed a Toxicity Training Tool (Denton, Miller, Stuber 2007) which provides detailed permitting language for toxicity conditions. A copy of this training tool was provided to the Port during the course of the audit. EPA will provide technical assistance to the Regional Water Board with Order reissuance. During the audit, the Port stated its opinion that the Order was ambiguous regarding toxicity testing details. Therefore, the Port should always contact the Regional Board for clarification.

6.4.7. Collaborative Monitoring. Regional monitoring efforts linked with the City of Stockton and other stakeholders could be used for the receiving water sampling and bioassessment.

6.4.8. Upstream Source Identification Monitoring. Although the process appears effective and should continue, it could be enhanced by integrating more discrete sample locations within the East and West Complexes.

6.4.9. Industrial Activities Monitoring. This sampling program should be integrated within the Urban Runoff program and the D-1 through D-15 sample locations. Ultimately, this program should be integrated within the larger municipal component and the Port should not apply for coverage under the General Permit for its facilities (e.g. fertilizer storage).

References

Denton DL, Miller JM, Stuber RA. 2007. EPA Regions 9 and 10 toxicity training tool. November 2007. San Francisco, CA.

USEPA. 1991. Methods for aquatic toxicity identification evaluations: Phase I toxicity characterization procedures. Second edition. Norberg-King TJ, Mount DI, Durhan EJ, Ankley GT, Burkhard LP, Amato JR, Lukasewycz MT, Schubauer-Berigan MK, Anderson-Carnahan L, editors. EPA/600/6-91/003.

USEPA.1994. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. 3rd Edition. EPA/600/4-91/002.

USEPA. 2000. Understanding and accounting for method variability in whole effluent toxicity applications under the National Pollutant Discharge Elimination System Program. Eds: Denton DL, Fox J, Fulk FA, Greenwald K, Narvaez M, Norberg-King TJ, Phillips L. EPA/833/R-00-003.

USEPA. 2002. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. 4th Edition. EPA/821-R-02-013.

Attachment 1

Inspection Reports for Port-Owned and -Operated Facilities:

Vehicle and Equipment Maintenance Area
Fertilizer Warehouses and Transfer Area
Aboveground Tank Refueling Area
Equipment Wash Pad Area

United States Environmental Protection Agency
Washington D.C. 20460

EPA NPDES Industrial Stormwater Compliance Inspection Report

Section A: National Data System Coding

NPDES	Permit ID Number		
MS4PERMIT	CAS008407 7		
SIC Code	Acreage	Receiving Water / MS4	
	1	Retention Basin → San Joaquin River	

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time/Date	Permit Effective Date
Maintenance Facility **Intersection of Port Road F and Port Road 14** **2201 West Washington Street,** **Stockton, CA 95203**	**March 19, 2008 9:30 A.M** Exit Time/Date **March 19, 2008 10:15 A.M**	Permit Expiration Date

Name(s) of On-Site Representatives	Title(s)	
James Neal **WGR Southwest, Inc**	**WGR Southwest, Inc** **Contractor**	
Name, Address of Responsible Official **Richard Aschieris**	Title Port Director	
	Phone Number **(209) 946-0246**	Contacted: YES ___ NO ___

Section C: Areas Evaluated During Inspection
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

M	SWPPP	M	Records/Reports	S	Facility Site Review	N	Effluent/Receiving Waters	N	Self-Monitoring Program

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Industrial activities include material and waste handling, (automotive fluids, waste oil filters, paints, chemicals and scrap metals) vehicle and equipment maintenance and storage.

The roofs over the vehicle maintenance area were missing sections and in need of repair, exposing oil-stained surfaces to storm water. Roughly one or two cubic yards of an unknown white substance stored in an outdoor covered Quonset-Hut storage area and inspectors observed track-out of the substance outside of the covered area. Inspectors also observed staining and pooling of oil on outdoor unprotected surfaces and it appeared that spill response kits were not used to address spills. Inspectors examined sedentary vehicles which contained automotive fluids that should have been drained. Storm water from the Vehicle and Equipment Maintenance Area discharge into a nearby ditch located along West Washington Street and into two storm drain inlets on the north side of Road G. The majority of the storm water will accumulate in above ground storage tanks and it is either allowed to dissipate by evaporation or is taken offsite for treatment.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone	Date
Ann Murphy	**US EPA Region 9** **Clean Water Act Compliance Office WTR-7)** **(415) 972-3640**	30 June 2008

SWPPP DISCUSSION (include areas of concern on SWPPP review)

The SWPPP was not signed until March 18th, 2008 – the day before the inspection.
It was signed by Richard Aschieris, Port Director. WGR Southwest, Inc. revised the original draft in 2005 and again in 2008. The SWPPP was reviewed by Lynn Wall, Environmental Program Manager (Consulting) and/or Jeff Kasper, Deputy Port Director of Properties.
There is a port-wide site map but no site maps for each of the four individual yards covered under the one MS4 permit.
The SWPPP does not specify potential pollutants for each discharge area in the site map.
Storm water drop inlets are shown in the SWPPP on a map, however the locations of oil spill kits are not shown.
Specific locations of chemical storage were not found in the narrative or the site map.
There were only blank inspections within the SWPPP.

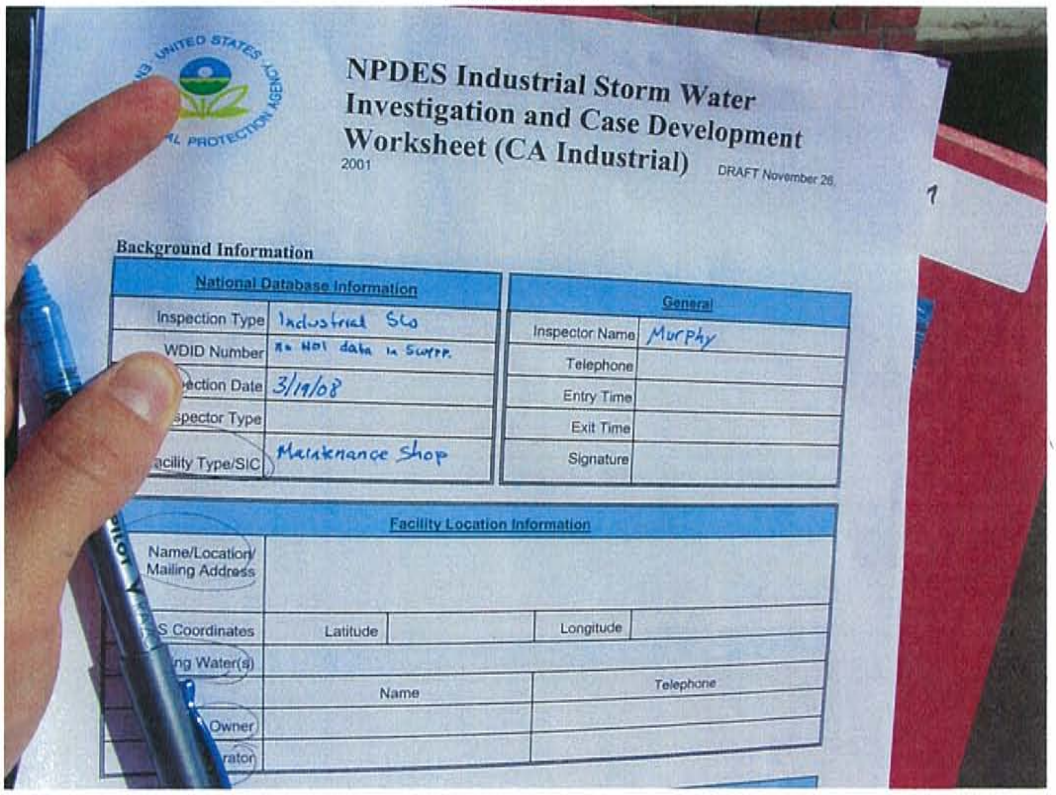
SITE DESCRIPTION (include description of facility)

The vehicle maintenance facility is located at the intersection of Port Road F and Port Road 14 The coordinates are Latitude 37o 56.861 N, Longitude 121o 19.598 W.

This yard occupies approximately 115,000 square feet of surface paved with asphalt or concrete and 17,000 square feet of unpaved impervious area. There are two covered sections, each constructed on a concrete foundation, and an uncovered storage where vehicles and equipment are stored.

Photo Log	
Image No.	**Description**
DSCN0575.JPG	Inspection reference photo.
DSCN0576.JPG	Quonset-Hut covered area containing an unknown white substance. Inspectors observed tracking of this substance. Note oil staining on the ground and accumulated white substance exposed to storm water.
DSCN0577.JPG	Same location as DSCN0576.JPG. White granular and powdered substance was scattered throughout this area which could potentially leave this area through a break in the berm.
DSCN0578.JPG	Same location as DSCN0576.JPG. Note the heavy staining on the ground in the right side of the photo in the shaded area.
DSCN0579.JPG	Retired vehicles containing automotive fluid that needs to be drained.
DSCN0580.JPG	Equipment and vehicles rusting, not under cover.
DSCN0581.JPG	Vehicle maintenance area. Note breaks in the roof and staining on the ground.
DSCN0582.JPG	Empty oil drum not fully under cover.
DSCN0583.JPG	Same as DSCN0582.JPG
DSCN0584.JPG	Exposed cans of paint and roofing material not under cover.
DSCN0585.JPG	Exposed rusting metal.
DSCN0586.JPG	Covered fueling area. Inspectors noted that the drums in the foreground of this photograph were not fully under cover.

DSCN0575



NPDES Industrial Storm Water Investigation and Case Development Worksheet (CA Industrial)
2001
DRAFT November 26,

Background Information

National Database Information	
Inspection Type	Industrial SCo
WDID Number	No HDI data in SWPP.
ection Date	3/19/08
spector Type	
acility Type/SIC	Maintenance Shop

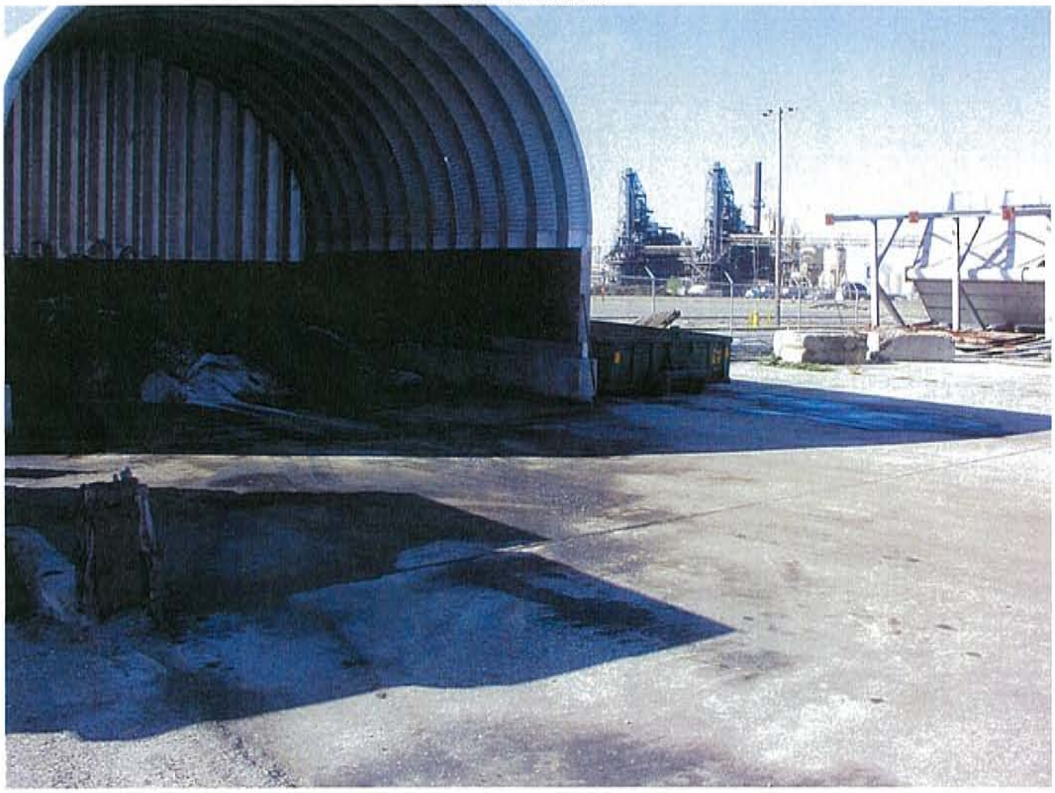
General	
Inspector Name	Murphy
Telephone	
Entry Time	
Exit Time	
Signature	

Facility Location Information				
Name/Location/ Mailing Address				
S Coordinates	Latitude		Longitude	
ng Water(s)				
	Name		Telephone	
Owner				
rator				

DSCN0576

DSCN0577

DSCN0578



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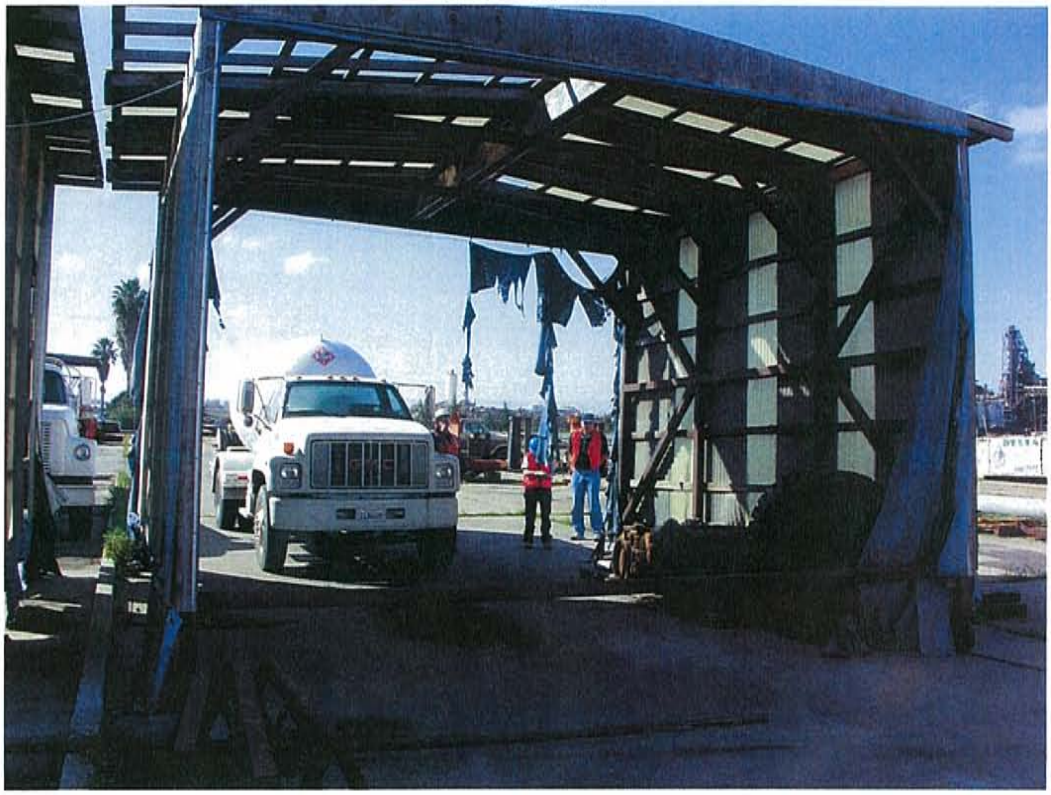
DSCN0580

DSCN0581



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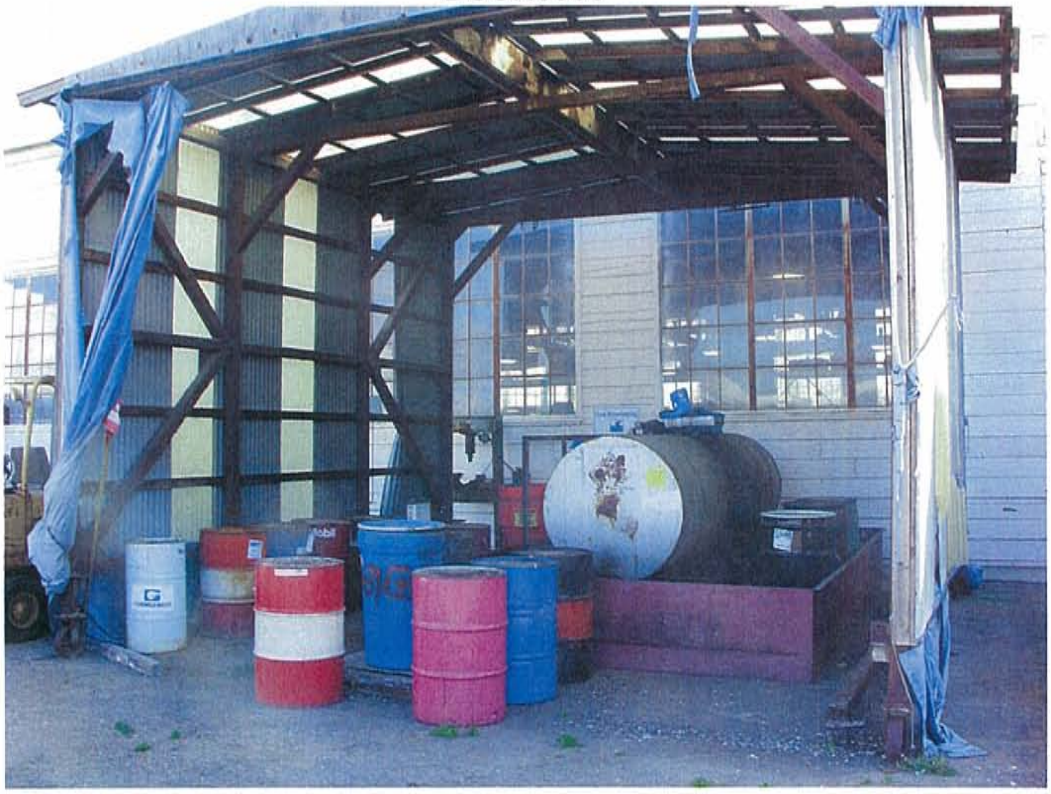
DSCN0583

DSCN0584

DSCN0585

DSCN0586



United States Environmental Protection Agency
Washington D.C. 20460

EPA NPDES Industrial Stormwater Compliance Inspection Report

Section A: National Data System Coding

NPDES	Permit ID Number		
	MS4PERMIT	CAS008407 7	
SIC Code	Acreage	Receiving Water / MS4	
	1	Retention Basin → San Joaquin River	

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time/Date	Permit Effective Date
Aboveground Tank Refueling Area **North of 2201 West Washington Street,** **Stockton, CA 95203**	**March 19, 2008 10:20 a.m.** Exit Time/Date **March 19, 2008 10:30 a.m.**	Permit Expiration Date
Name(s) of On-Site Representatives **James Neal**	Title(s) **WGR Southwest, Inc** **Contractor**	
Name, Address of Responsible Official **Richard Aschieris**	Title Port Director	
	Phone Number **(209) 946-0246**	Contacted: YES ___ NO ___

Section C: Areas Evaluated During Inspection
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

M	SWPPP	M	Records/Reports	S	Facility Site Review	N	Effluent/Receiving Waters	N	Self-Monitoring Program

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Industrial activities include material and waste handling, (automotive fluids, waste oil filters, paints, chemicals and scrap metals) vehicle and equipment maintenance and storage.
Structural controls include: The two tanks are set on an elevated concrete pad. The tanks are double-walled and include electronic leak detection systems. The storage tanks appeared to be in good condition. Two storm drains in the northwest drainage area have been retrofitted with a "Safe Drain" system which prevents fluids from draining into the drain.
There is no berm or secondary containment system surrounding the fueling area. The "Safe Drains" prevent any spills from entering the storm drain system because the valves are kept in the closed position unless a storm is predicted, when the valves will then be manually opened. Storm water from this area discharges into the ditch located adjacent to West Washington Street.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone	Date
Ann Murphy	**US EPA Region 9** **Clean Water Act Compliance Office WTR-7)** **(415) 972-3640**	30 June 2008

SWPPP DISCUSSION (include areas of concern on SWPPP review)

The SWPPP was not signed until March 18th, 2008 – the day before the inspection.
It was signed by Richard Aschieris, Port Director. WGR Southwest, Inc. revised the original draft in 2005 and again in 2008. The SWPPP was reviewed by Lynn Wall, Environmental Program Manager (Consulting) and/or Jeff Kasper, Deputy Port Director of Properties.
There is a port-wide site map but no site maps for each of the four individual yards covered under the one MS4 permit.
The SWPPP does not specify potential pollutants for each discharge area in the site map.
Storm water drop inlets are shown in the SWPPP on a map, however the locations of oil spill kits are not shown.
Specific locations of chemical storage were not found in the narrative or the site map.
There were only blank inspections within the SWPPP.

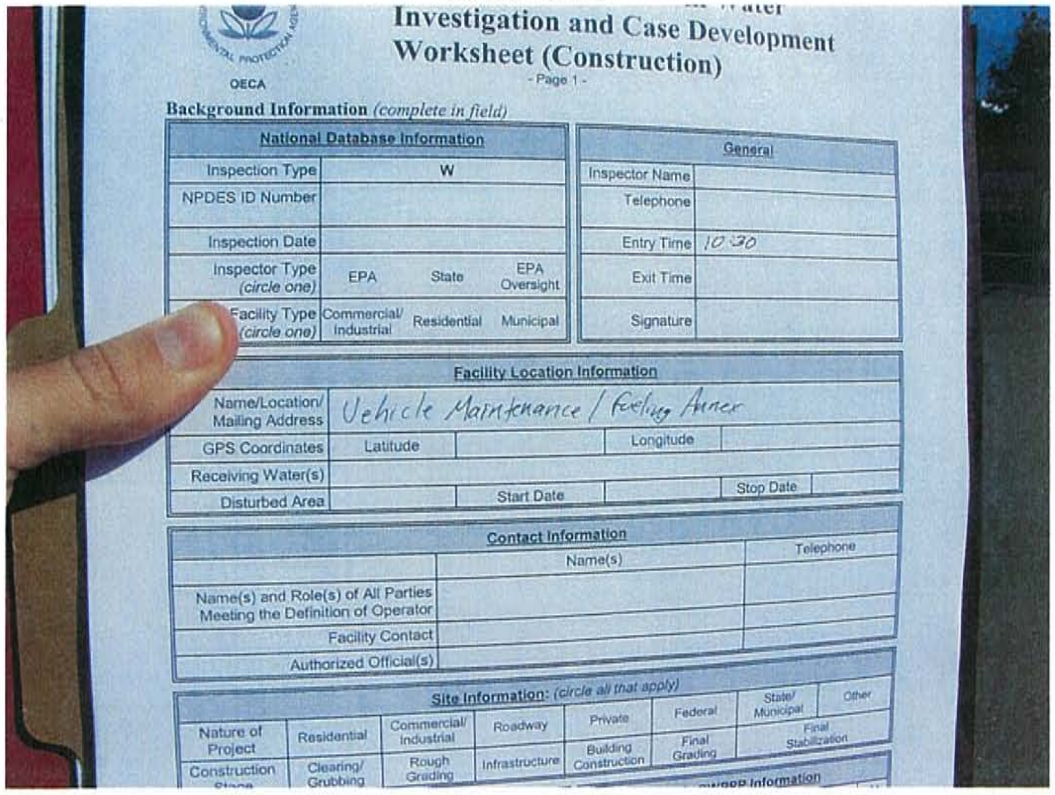
SITE DESCRIPTION (include description of facility)

The Port of Stockton Aboveground Tank Refueling Area is just north of the ERA Dept. The gasoline storage tank has a capacity of 10,000 gallons, and the diesel storage tank has a capacity of 4,000 gallons.

Photo Log

Image No.	Description
DSCN0587.JPG	Inspection reference photo.
DSCN0588.JPG	Storm drain equipped with the "Safe Drain" system which can be opened or closed. There is no way of visually knowing the position of the valve.
DSCN0589.JPG	Fueling area with no secondary containment system.
DSCN0590.JPG	Same location as DSCN0589.JPG.

DSCN0587



OECA

Investigation and Case Development Worksheet (Construction)

- Page 1 -

Background Information *(complete in field)*

National Database Information			
Inspection Type	W		
NPDES ID Number			
Inspection Date			
Inspector Type *(circle one)*	EPA	State	EPA Oversight
Facility Type *(circle one)*	Commercial/ Industrial	Residential	Municipal

General	
Inspector Name	
Telephone	
Entry Time	10:30
Exit Time	
Signature	

Facility Location Information					
Name/Location/ Mailing Address	Vehicle Maintenance / Fueling Annex				
GPS Coordinates	Latitude		Longitude		
Receiving Water(s)					
Disturbed Area		Start Date		Stop Date	

Contact Information	Name(s)	Telephone
Name(s) and Role(s) of All Parties Meeting the Definition of Operator		
Facility Contact		
Authorized Official(s)		

Site Information: *(circle all that apply)*							
Nature of Project	Residential	Commercial/ Industrial	Roadway	Private	Federal	State/ Municipal	Other
Construction Stage	Clearing/ Grubbing	Rough Grading	Infrastructure	Building Construction	Final Grading	Final Stabilization	

DSCN0588

DSCN0589

DSCN0590

United States Environmental Protection Agency
Washington D.C. 20460

EPA NPDES Industrial Stormwater Compliance Inspection Report

Section A: National Data System Coding

NPDES	Permit ID Number		
MS4PERMIT	CAS008407 7		
SIC Code	**Acreage**	**Receiving Water / MS4**	
4491	1	Deep Water Channel	

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time/Date	Permit Effective Date
Bulk Fertilizer Warehouse **Port Warehouse 5 & 6 located at the intersection of Port Road A and Port Road 8.** **Stockton, CA 95203**	**March 19, 2008 10:37 AM**	
	Exit Time/Date **March 19, 2008 11:45 AM**	Permit Expiration Date

Name(s) of On-Site Representatives	Title(s)	
James Neal	**WGR Southwest Inc. Contractor**	**(209) 334-5363 ext. 203**

Name, Address of Responsible Official	Title	
Richard Aschieris	**Port Director**	
	Phone Number **(209) 946-0246**	Contacted: YES X NO ___

Section C: Areas Evaluated During Inspection
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

M	SWPPP	N	Records/Reports	M	Facility Site Review	N	Effluent/Receiving Waters	S	Self-Monitoring Program

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

BMPs to contain fertilizers at the transfer area appeared to be inadequately implemented as inspectors observed suspended white deposits of fertilizers on horizontal surfaces of the main hopper, the modular conveyers, on the ground and in the tracks which the equipment moves over. These areas are exposed to wind and the elements.

The Facilities SWPPP Section 5.1.1 states that the fertilizer transfer area is regularly cleaned with a port-owned sweeper, Section 5.1.1 states that "storm drain outlets which are potentially impacted by contaminated stormwater are covered with two layers of plastic liner." Photo DSCN0606.JPG shows white powder surrounding an unprotected storm drain.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone	Date
Ann Murphy	**US EPA Region 9** **Clean Water Act Compliance Office (WTR-7)** **(415) 972-3640**	30 June 2008

SWPPP DISCUSSION (include areas of concern on SWPPP review)

The SWPPP was not signed until March 18th, 2008 – the day before the inspection. It was signed by Richard Aschieris, Port Director. Storm water drop inlets are shown in the SWPPP on a map, however the locations of oil spill kits are not shown. Specific locations of chemical storage were not found in the narrative or the site map.

Implementation of SWPPP requirements appeared to be inadequate in the following areas:
Section 5.1.3 (Dust and Particulate Generating Activities) states that "various structural and non-structural BMPs are used to control dust or particles", but no BMPs were described to keep the wind from blowing the fertilizers from blowing away.

Section 7.1.1 (Good Housekeeping) states that the fertilizer warehouse and unloading area is swept when there is an accumulation of solids, either manually or with the sweeper and that a combination of absorbents and vacuuming is used to clean leaks of fertilizer on an as needed basis as deemed necessary by Port management.

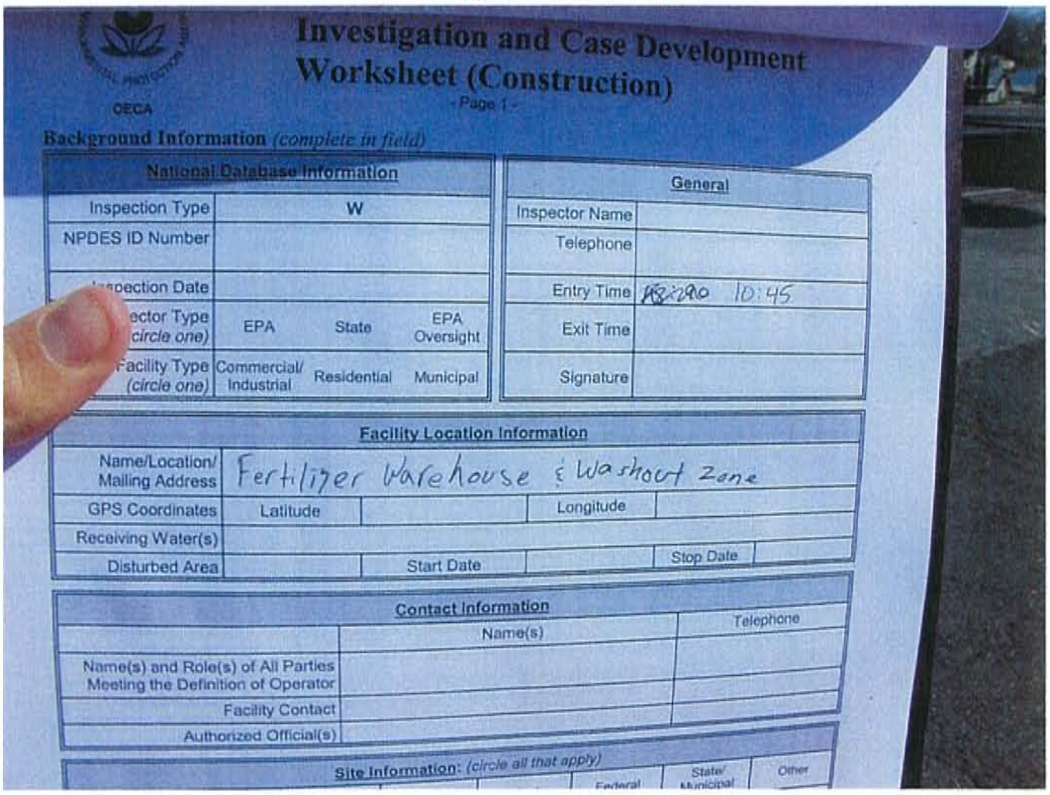
SITE DESCRIPTION (include description of facility)

The bulk fertilizer warehouse is Port Warehouse 5 & 6 (this one structure) and is located at the intersection of Port Road A and Port Road 8. The coordinates are Latitude 37o 57.017 N, Longitude 121o 19.845 W. The fertilizer packaging operation is located in Port Warehouse 1, 2, 3, & 4 (this one structure). The coordinates are Latitude 37o 57.020 N, Longitude 121o 19.674 W. The warehouses have a total square footage of nearly 306,000 square feet. Fertilizers are stored in different parts of the warehouses by available space, logistics, and ease of handling. Hence, no fixed areas for storage and handling of specific type of fertilizers are designated.

This area is used to store and handle fertilizer materials on behalf of the Port's customers. Fertilizer is unloaded from a seagoing vessel into a main hopper, then transferred to a zipper conveyer belt to modular conveyers and finally into warehouses on Docks 9, 10 and 11. The material is stored and handled in a warehouse for ultimate delivery to the commodity owners' buyers/customers. In some instances, a portion or all of the fertilizers may directly be transferred to delivery trucks for immediate shipment to their intended customers/designations.

Photo Log	
Image No.	**Description**
DSCN0592.JPG	Inspection reference Photo
DSCN0593.JPG	Fertilizer conveyer (suspended in the air)
DSCN0594.JPG	Fertilizer conveyer. Note white substance at the bottom of the hopper. Inspectors observed this powder dripping / flaking off with the wind.
DSCN0595.JPG	White powder on equipment.
DSCN0596.JPG	White powder accumulated on horizontal surfaces.
DSCN0597.JPG	White powder observed in train tracks and on transport equipment.
DSCN0598.JPG	White powder observed in train tracks and on transport equipment. James Neal believed that this crane on the west end is not operated.
DSCN0599.JPG	White powder observed throughout the site with the potential to blow into the adjacent Sacramento River.
DSCN0600.JPG	White powder observed in train tracks and on transport equipment.
DSCN0601.JPG	Washout area - this photo was taken out of sequence.
DSCN0602.JPG	Fertilizer warehouse on the northern side. Visquine blocks the storm drain in the foreground.
DSCN0603.JPG	Same location as DSCN0602.JPG. Observed staining on the clamshell and on the ground on both sides of the clamshell.
DSCN0604.JPG	Drain # 207. It was unknown at the time of the inspection if the storm drain was plugged. Unknown substance shown around the drain.
DSCN0605.JPG	One of several drums containing an unknown white substance. According to James Neal, the material is most likely raw PVC polymers.
DSCN0606.JPG	White powder shown surrounding a storm drain.
DSCN0607.JPG	White powder observed on pallets. Most likely fertilizer according to James Neal.
DSCN0608.JPG	Significant track out from the bagging operation warehouse.

DSCN0592



OECA

Investigation and Case Development Worksheet (Construction)

- Page 1 -

Background Information *(complete in field)*

National Database Information			
Inspection Type	W		
NPDES ID Number			
Inspection Date			
Inspector Type (circle one)	EPA	State	EPA Oversight
Facility Type (circle one)	Commercial/ Industrial	Residential	Municipal

General	
Inspector Name	
Telephone	
Entry Time	8/2/20 10:45
Exit Time	
Signature	

Facility Location Information				
Name/Location/ Mailing Address	Fertilizer Warehouse & Washout Zone			
GPS Coordinates	Latitude		Longitude	
Receiving Water(s)				
Disturbed Area		Start Date		Stop Date

Contact Information	Name(s)	Telephone
Name(s) and Role(s) of All Parties Meeting the Definition of Operator		
Facility Contact		
Authorized Official(s)		

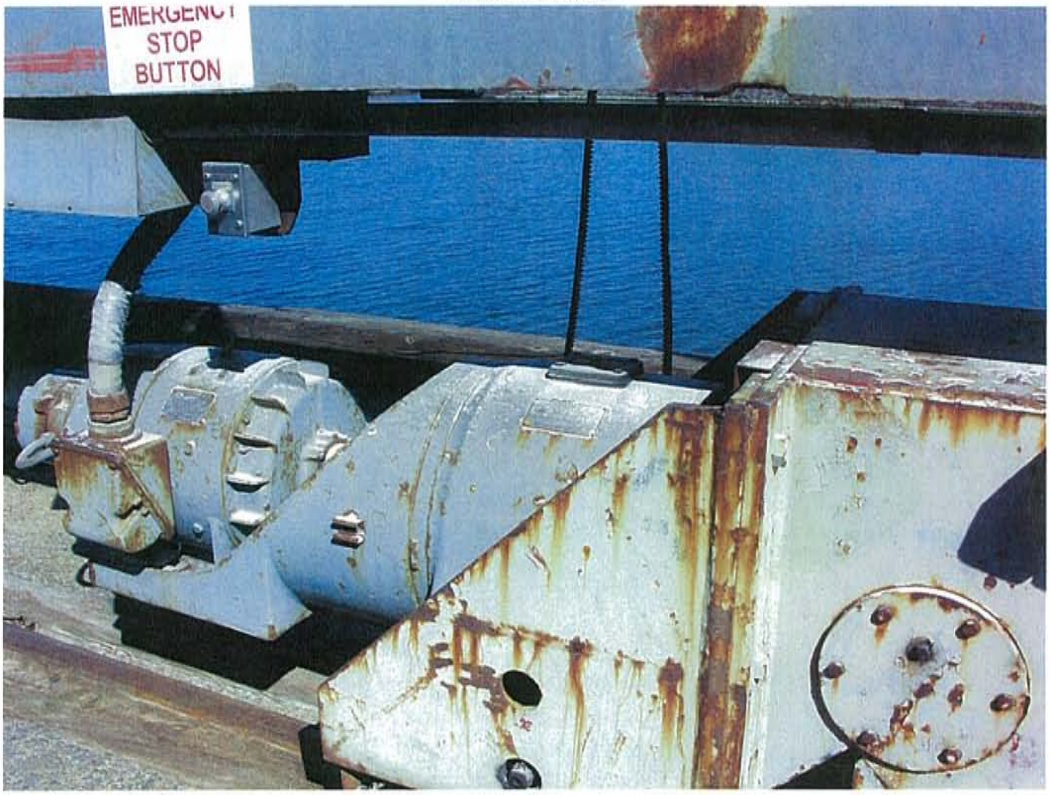
Site Information: *(circle all that apply)* Federal State/ Municipal Other

DSCN0593

DSCN0594

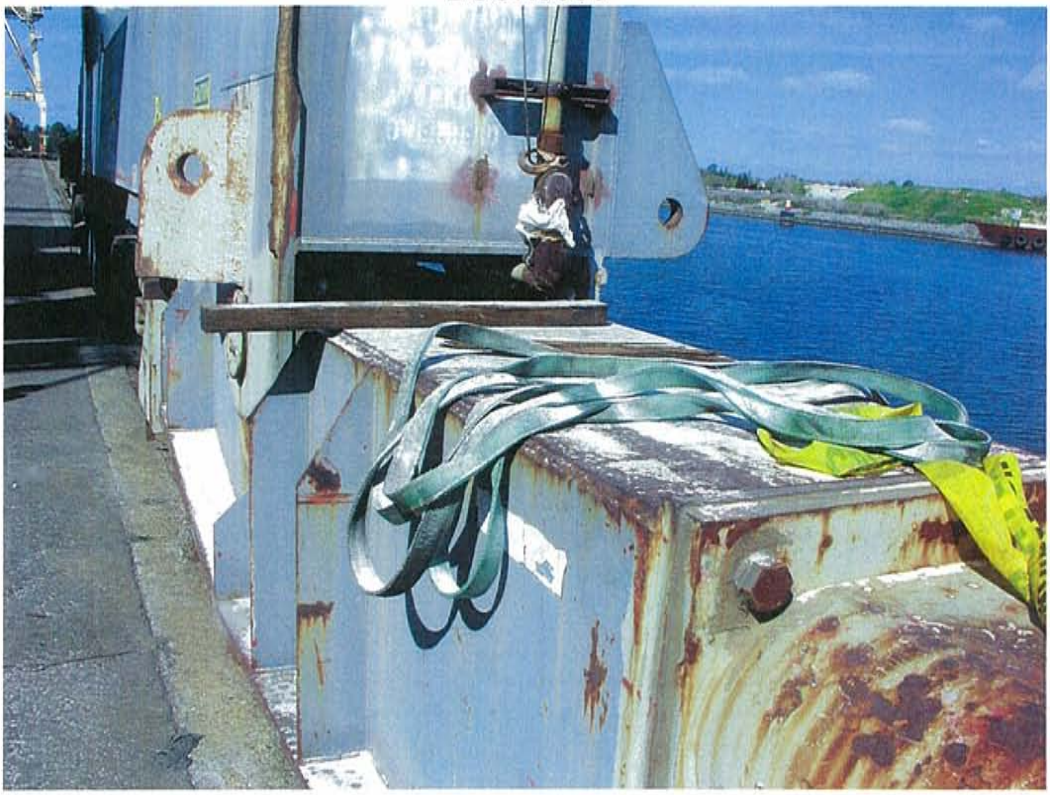
DSCN0595

DSCN0596

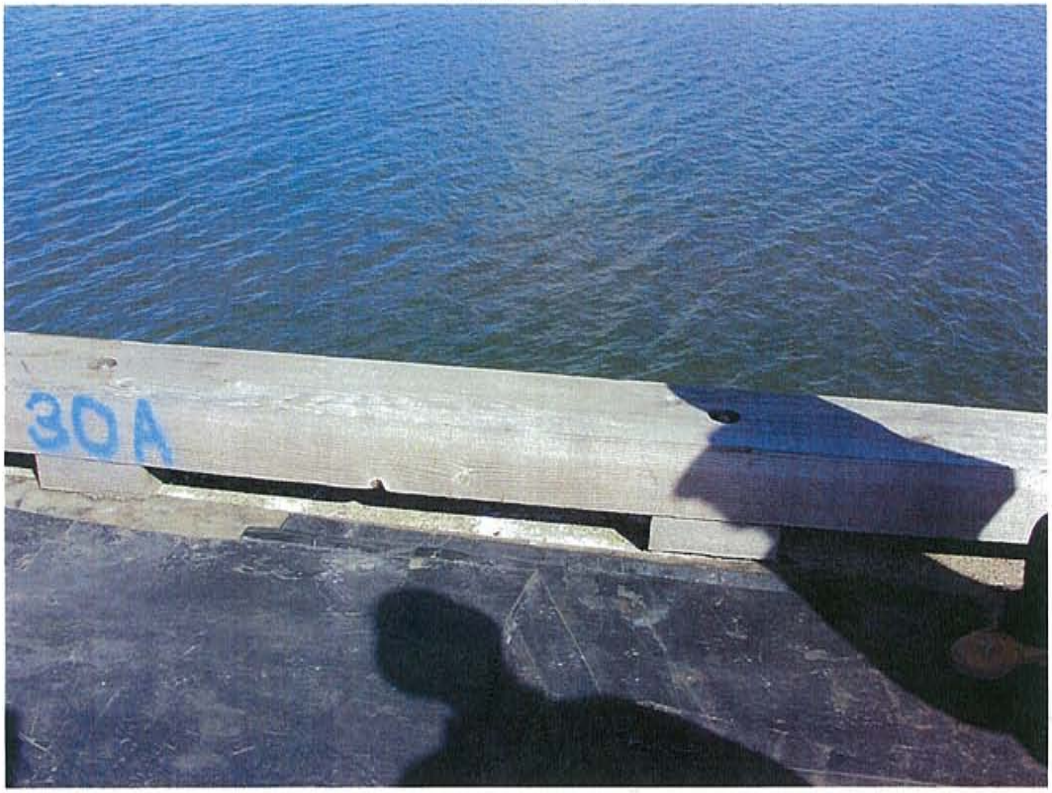


DSCN0597

DSCN0598



DSCN0599



DSCN0600

DSCN0601

DSCN0602

DSCN0603

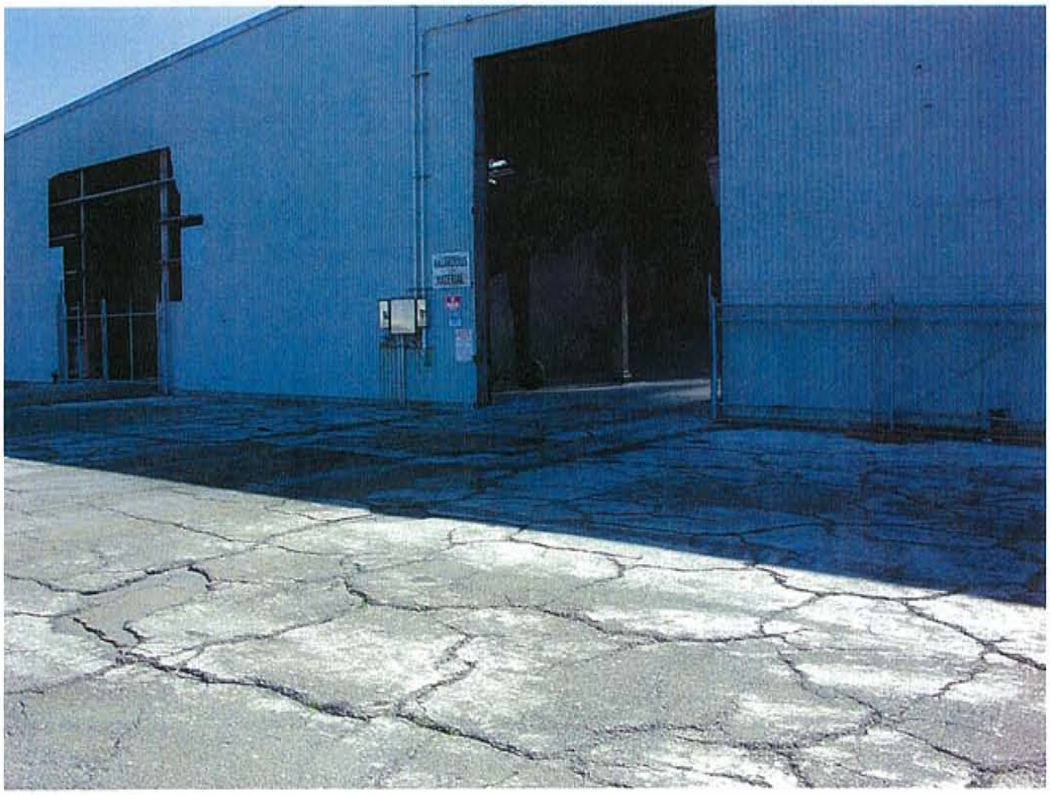
DSCN0604

DSCN0605

DSCN0606

DSCN0607

DSCN0608



United States Environmental Protection Agency
Washington D.C. 20460

EPA NPDES Industrial Stormwater Compliance Inspection Report

Section A: National Data System Coding

NPDES	Permit ID Number		
	MS4PERMIT	CAS008407 7	
SIC Code	**Acreage**	**Receiving Water / MS4**	
	1	Deep Water Channel	

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time/Date	Permit Effective Date
Vehicle Wash Pad **on Port Road 8, North West of Port Warehouse 6** **Stockton, CA 95203**	**March 19, 2008 11:50 A.M** Exit Time/Date **March 19, 2008 12:00 P.M.**	Permit Expiration Date

Name(s) of On-Site Representatives	Title(s)	
James Neal **WGR Southwest, Inc**	**WGR Southwest, Inc** **Contractor**	
Name, Address of Responsible Official **Richard Aschieris**	Title **Port Director**	
	Phone Number **(209) 946-0246**	Contacted: YES ___ NO ___

Section C: Areas Evaluated During Inspection
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	SWPPP	N	Records/Reports	S	Facility Site Review	N	Effluent/Receiving Waters	N	Self-Monitoring Program

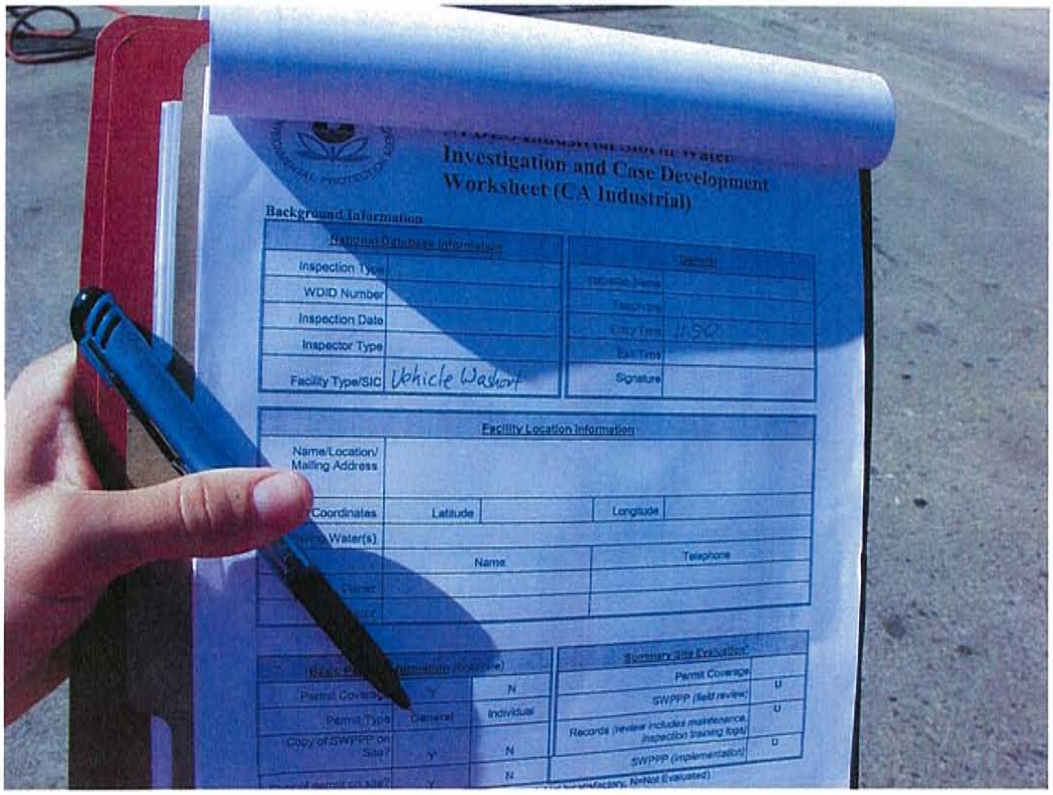
Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Contaminated wastewater drains to a collection sump sending the rinsate to a poly-tank to be sent off-site for recycling or proper disposal. Washout pad extended to wash large conveyors when needed. There is a berm on the West side of the washout pad. Berm appears to be working properly.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone	Date
Ann Murphy	**US EPA Region 9** **Clean Water Act Compliance Office WTR-7)** **(415) 972-3640**	30 June 2008

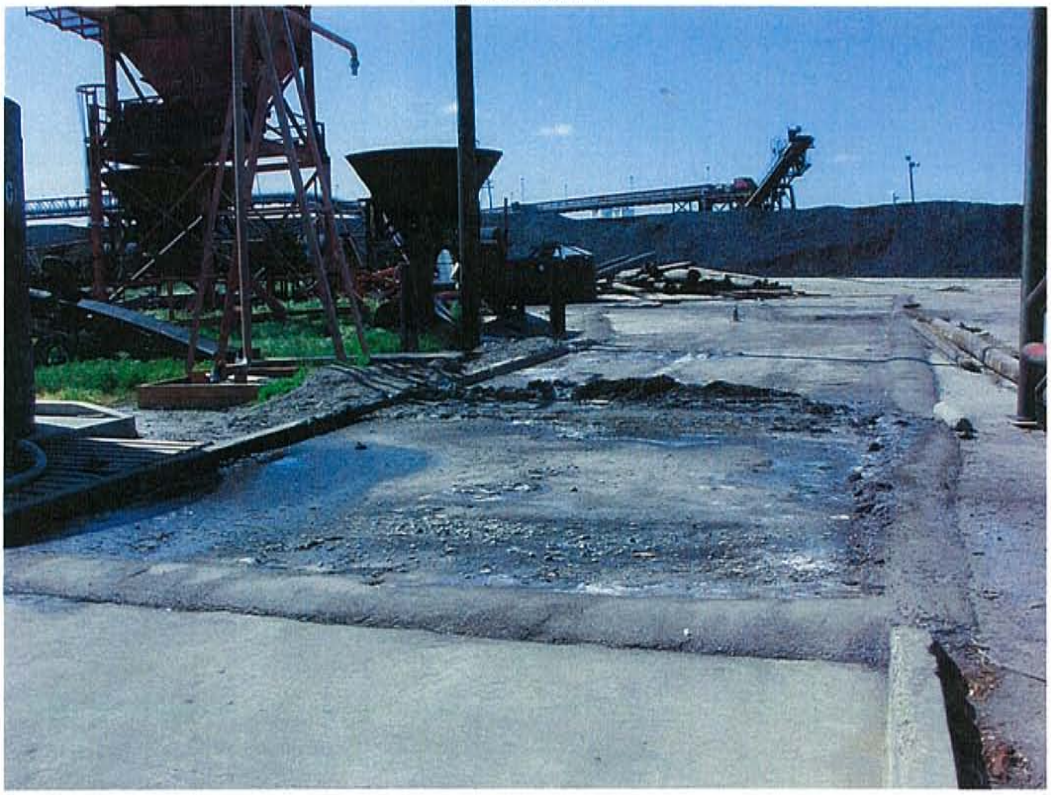
Photo Log	
Image No.	Description
DSCN0610	Washout pad in a bermed area.
DSCN0611	West outside of the Washout pad with unknown oily fluids accumulating inside the berm.
DSCN0612	West side of Washout pad cut through in the berm allows stormwater to drain through gravel to the Washout pad.

DSCN0609



DSCN0610

DSCN0611



DSCN0612

Port of Stockton - Municipal Separate Storm Sewer System (MS4)
(Order No. R5-2004-0136)
Exhibit Log

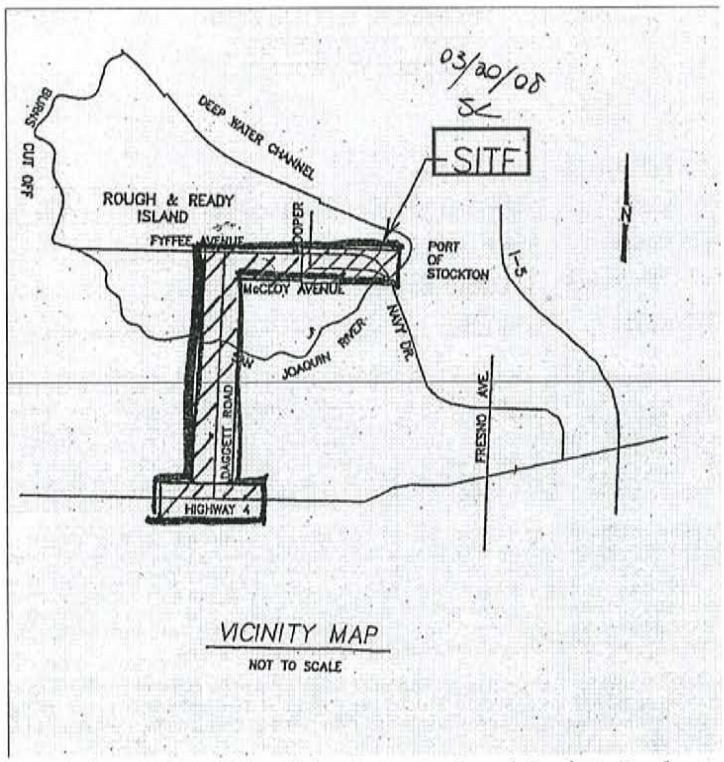


Exhibit 1 – Approximate location of the Daggett Road Project Packages A, B, C, D, and E (adapted from the SWPPP for Navy Drive to McCloy Security Reroute Project Package D, dated April 13, 2007).

3/18/08

PORT OF STOCKTON
CONSTRUCTION SITE
NOTICE TO PROCEED

Project Owner's Name: Port of Stockton

Project Name: Rehabilitation of Daggett Rd and McCloy Ave Pkg. E

Project Manager: Brandon Brockett – Kleinfelder

Construction Manager: Leo Vasconcelos – DSS

Estimated Start Date: August 13, 2007 Estimated Completion Date: November 15, 2007

On behalf of the Port of Stockton, I verify that a member of the Port of Stockton's Environmental Department has reviewed the submitted Construction Management Fact Sheet (CMFS) or Storm Water Pollution Prevention Plan (SWPPP) as required. The CMFS/SWPPP is deemed complete in accordance with requirements outlined in the Port of Stockton's Construction Management Program. Based upon the information provided, the Project Manager may proceed with construction activities as of the date listed above. If the project is delayed past the estimated start date, the Port's Environmental Department is to be notified of the new start date at least 14 days prior to the commencement of land disturbing activities.

It is the understanding of the Port that all construction management practices outlined in the CMFS/SWPPP will be implemented on-site for the duration of the Project. The Port will inspect all construction sites for compliance with the CMFS or SWPPP. Construction projects will be inspected at least once every two weeks during the wet season (October – April), and once a month during the dry season (May – September), until construction is terminated. If visual observations or monitoring results identify violations or non-compliance of the project's CMFS/SWPPP or the Port's water quality objectives, the Port will require corrective action, as necessary to address site conditions.

A Notice of Completion (NOC) will be issued after all components of the CMFS or SWPPP as applicable have been completed. For a SWPPP qualified site a Notice of Termination (NOT) must be filed and approved by the California Regional Water Quality Control Board, Central Valley Region before a NOC can be issued.

Please send the NOT to:
CRWQCB-CVR
11020 Sun Center Dr. #200
Rancho Cordova, CA. 95678

Port Representative

July 23, 2007
Date

Construction-NTP-Daggett-McCloy-Rehab-pkg E.doc

Exhibit 2 – Notice to Proceed for Daggett Road Project Package E, signed August 13, 2007.

03/14/08
SC

Proposed Lease Requirements for the A Plus Lease Renewal
Attachment C

1. In accordance with the requirements in the tenant's Industrial NPDES General Permit (WDID 5S39108275), the tenant must reduce or prevent toxic and non-conventional pollutants through the implementation of best available technology economically achievable (BAT) and reduce and prevent conventional pollutants through the implementation of best conventional pollutant control technology (BCT). Conventional pollutants associated with the tenant's existing and proposed activities include total suspended solids (TSS), settleable solids (SS), pH altering substances, oil & grease, and substances that elevate the biological oxygen demand (BOD). Toxic and/or non-conventional pollutants associated with the tenant's existing and proposed activities include: aluminum, arsenic, copper, iron, and zinc; volatile organics; and pesticides. The Port is requiring the tenant to propose a storm water treatment control measure that meets the State's and USEPA's BAT/BCT criteria. Storm water must pass through the control measure. No release of untreated storm water is allowed for storm events below a 10 year/24-hour storm event design criteria. The tenant is not authorized to release storm water into the Port's storm water conveyance system that is above the benchmark levels contained in the tenant's Industrial NPDES General Permit.

2. In accordance with the requirements in the tenant's Industrial NPDES General Permit, discharge of all non-storm water to the Port's storm water conveyance system is prohibited. The tenant must segregate non-storm water from storm water and provide an acceptable and Port-approved mechanism to capture and divert all non-storm water sources away from the Port's storm water conveyance system.

3. The Port was required by its Municipal Separate Storm Water Sewer System (MS4) NPDES Permit, to develop and implement a Storm Water Development Standards Plan (DSP) for all new development and significant redevelopment at the Port. The DSP applies to all new development but also to "significant redevelopment", which is defined by the State and the Port to include "the creation or addition of at least 5,000 square feet of impervious surfaces on an already developed site." Since the tenant has installed more than 5,000 square feet of impervious surface since February 17, 2006, the DSP applies to the tenant. The tenant will need to comply with the DSP by doing the following: a) Submit a list of proposed best management practices (BMPs) and treatment control measures as specified in the DSP for the Port's review and approval by April 1, 2008; b) Based on the Port's review and comments, submit engineering and design specifications, including sizing criteria, drawings, a schedule for implementation, and the BMP maintenance agreement by June 1, 2008; and c) Complete the installation and implementation of all proposed BMPs and treatment controls by October 1, 2008.

4. In accordance with the Port's storm water control tariff, the tenant is prohibited from allowing solids, debris, and other substances to flow or fall into the Port's storm water drain inlets (DIs) and conveyance system. Therefore, the tenant must have appropriate and adequate drain inlet protection in place to prevent solids and other non-storm water substances from entering the storm drainage

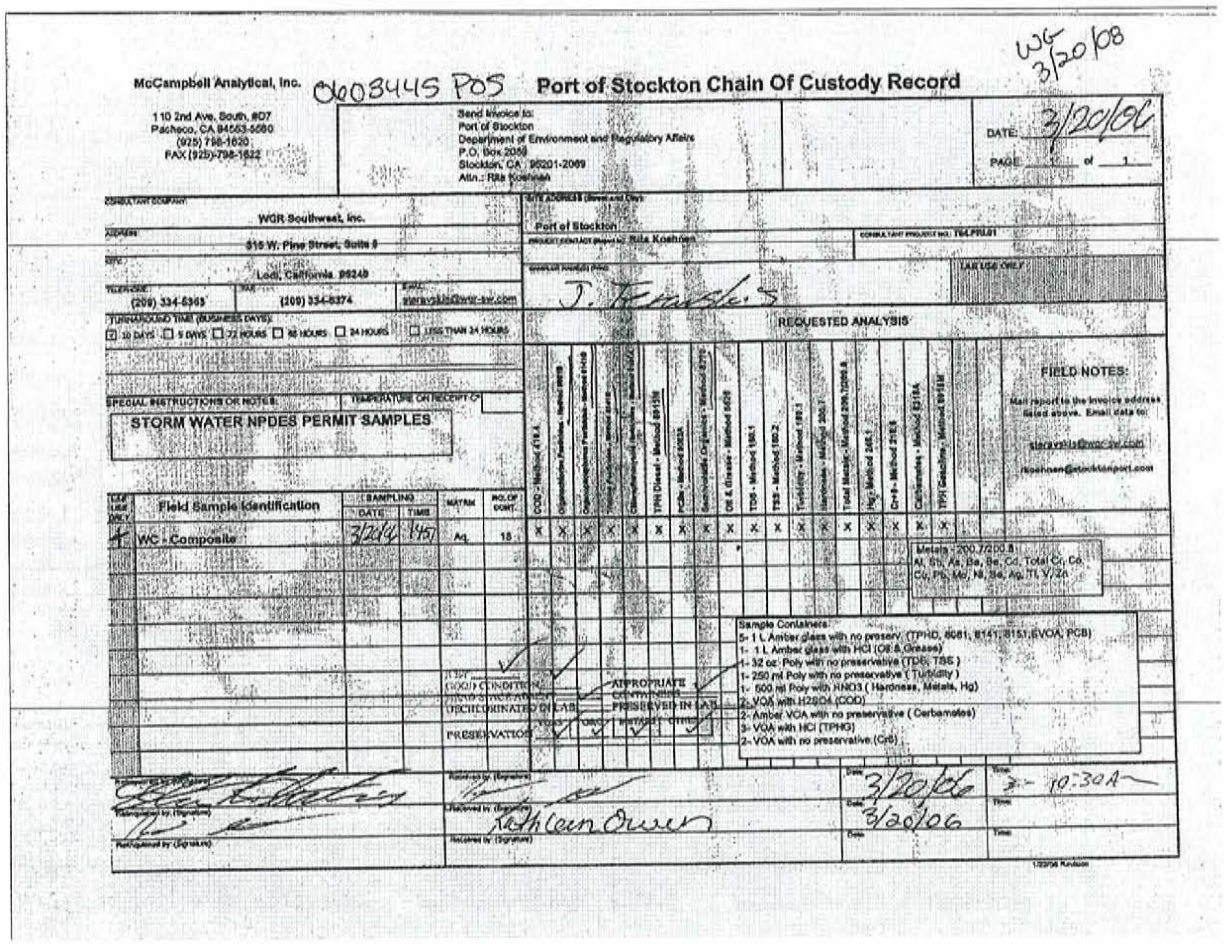
Exhibit 3 –The A-Plus tenant site was identified as a DSP project based on the addition of impervious surfaces over time and will likely be required to implement treatment control BMPs.

Port of Stockton - Municipal Separate Storm Sewer System (MS4)
(Order No. R5-2004-0136)
Exhibit Log

03/29/08

Date Received	Lease Approved Date	Project Owner	Project Name	Location	Size	Start Date	Completion Date
7/11/2007	7/11/2007	Northern California College of Construction	School of Construction	290 N Hooper St	15 acres	7/11/2007	Continuing
4/6/2007	8/15/2006	Community Fuels-American Biodiesel	Biodiesel Plant	809-C Snedecker	2 acres	4/15/2007	Open
8/1/2006	8/15/2006	Ferguson	Ferguson Distribution Center	1550 Daggett Road	58 acres	8/1/2006	2/15/2008
9/28/2007	8/17/2007	M & L Commodities	Inland Cold Storage	Port Rd A and 5	18 acres	9/5/2007	Open
8/15/2006	9/5/2006	Lowe's	Lowe's Distribution Center	Luce Ave	20 acres	11/0/2006	1/00/2008
3/22/2007	2/5/2007	Pacific Ethanol	Ethanol Plant	Navy Drive	99 acres	3/22/2007	Open
9/14/2006		Port of Stockton	Daggett Road/HWY 4		more than an acre	9/15/2006	12/5/2007
7/23/2007		Port of Stockton	Daggett Rd/McCloy Rehab Project		more than an acre	8/13/2007	11/7/2007
4/30/2007		Port of Stockton	Navy Drive/McCloy reroute		more than an acre	4/30/2007	11/5/2007
1/15/2007	2/5/2007	NuStar	Tank Farm	Navy Drive	1.4 acres	1/29/2007	10/1/2007
5/24/2007		Port of Stockton	East Interchange Rail Project	Port Road 21	more than an acre	6/7/2007	12/7/2007

Exhibit 4 –The lease approval date and construction start date for the Lowe's and Ferguson Distribution Centers occurred after the February 17, 2006, DSP compliance date.



McCampbell Analytical, Inc. 0603445 P05 **Port of Stockton Chain Of Custody Record**

110 2nd Ave. South, #D7
Pacheco, CA 94553-5560
(925) 798-1620
FAX (925)-798-1622

Send Invoice to:
Port of Stockton
Department of Environment and Regulatory Affairs
P.O. Box 2089
Stockton, CA 95201-2089
Attn.: Rita Koehnen

DATE: 3/20/06
PAGE 1 of 1

CONSULTANT COMPANY: WGR Southwest, Inc.
ADDRESS: 315 W. Pine Street, Suite 8
CITY: Lodi, California 95240
TELEPHONE: (209) 334-6369 FAX: (209) 334-6374 E-MAIL: stanevolis@wgr-sw.com
SITE ADDRESS (Street and City): Port of Stockton
PROJECT CONTACT (Name): Rita Koehnen
CONSULTANT PROJECT NO.: T6LPRL01
SAMPLER NAME(S) PRINT: J. Kinsler
LAB USE ONLY
TURNAROUND TIME (BUSINESS DAYS): ☑ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS
SPECIAL INSTRUCTIONS OR NOTES: STORM WATER NPDES PERMIT SAMPLES
TEMPERATURE ON RECEIPT C°

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	COD - Method 410.4	Organochlorine Pesticides - Method 8081B	Organophosphorus Pesticides - Method 8141A	Herbicides - Method 8151A	Chlorinated Hydrocarbons - Method 8021B	TPH Diesel - Method 8015M	PCBs - Method 8082A	Semivolatile Organics - Method 8270	Oil & Grease - Method 5520	TDS - Method 160.1	TSS - Method 160.2	Turbidity - Method 180.1	Hardness - Method 200.7	Total Metals - Method 200.7/200.8	Hg - Method 245.1	Cr+6 - Method 218.6	Carbamates - Method 531A	TPH Gasoline - Method 8015M		
4	WC - Composite	3/20/06	1457	Aq	18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

Metals - 200.7/200.8:
Al, Sb, As, Ba, Be, Cd, Total Cr, Co, Cu, Pb, Mo, Ni, Se, Ag, Tl, V, Zn

Sample Containers:
5- 1 L Amber glass with no preserv. (TPHD, 8081, 8141, 8151, EVOA, PCB)
1- 1 L Amber glass with HCl (Oil & Grease)
1- 32 oz. Poly with no preservative (TDS, TSS)
1- 250 ml Poly with no preservative (Turbidity)
1- 500 ml Poly with HNO3 (Hardness, Metals, Hg)
2- VOA with H2SO4 (COD)
2- Amber VOA with no preservative (Carbamates)
3- VOA with HCl (TPHG)
2- VOA with no preservative (Cr6)

LAB USE ONLY: GOOD CONDITION ✓ ✓ APPROPRIATE CONTAINERS ✓
HEAD SPACE ABSENT
PROPERLY PRESERVED IN LAB
PRESERVATION: VOA ✓ ORG ✓ METALS ✓ OTHER ✓

Relinquished by (Signature): [signature] Date 3/20/06 Time 10:30A
Received by (Signature): Kathleen Owen Date 3/20/06
Relinquished by (Signature): Date Time
Received by (Signature): Date Time

1/23/06 Revision

Exhibit 5 – Chain-of-Custody sheet for 3/20/06 composite sample at the WC monitoring station. Note that the analytical methods used are not consistent with 40 CFR Part 136 requirements.

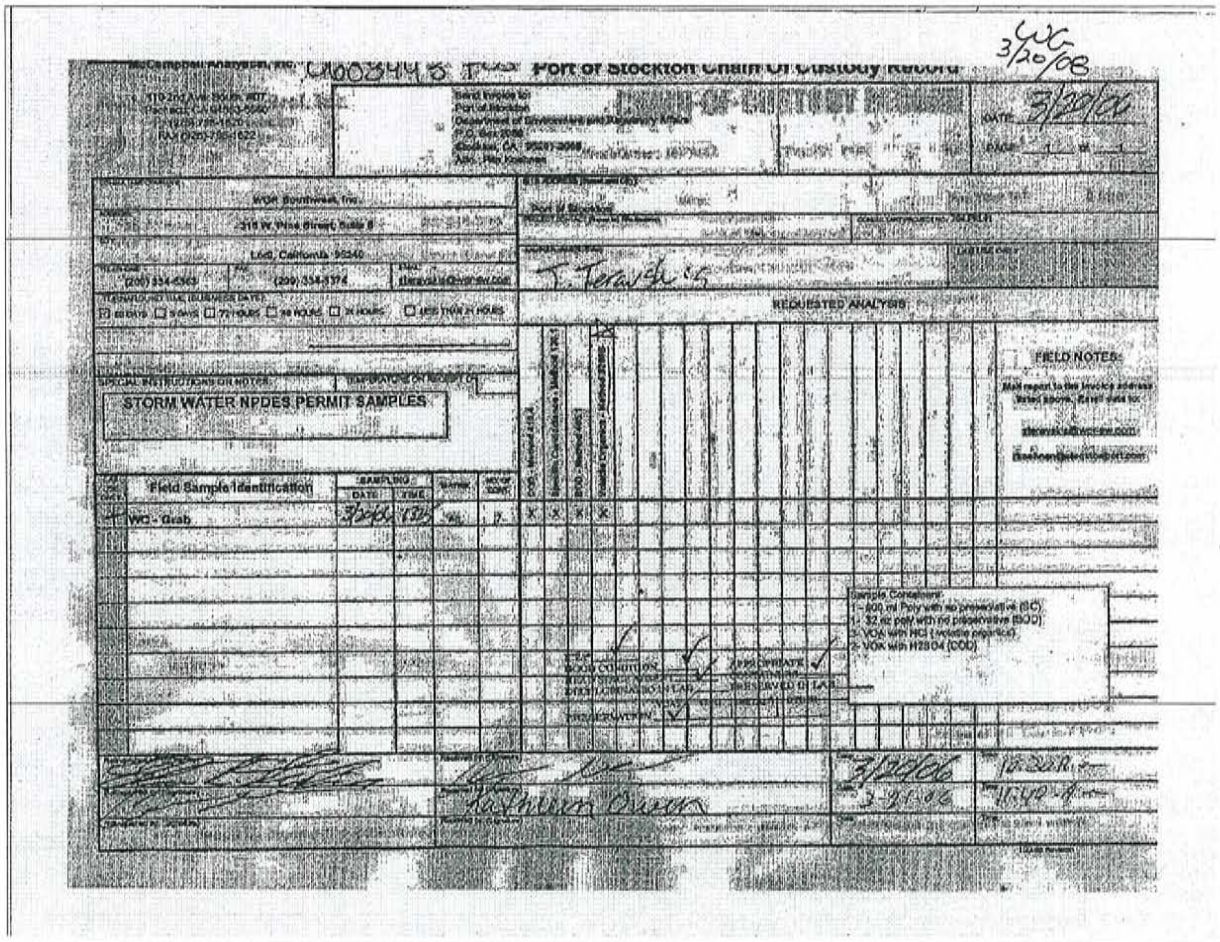


Exhibit 5 (continued) – Chain-of-Custody sheet for 3/20/06 grab sample at the WC monitoring station. Note that the analytical method used for volatile organic compounds is not consistent with 40 CFR Part 136 requirements.

D2 - Comp

Port of Stockton

Storm Water Data Collection Worksheet
2005/2006 Storm Season

WG 3/20/08

9/13/05

Location	Date	Location Description
D2	1/18/06	North of Port Rd. #2 next to cement plant; Marker # 009

Time of Grab Sample and 1st Portion of Composite Sample	8:35

Temperature	pH	Dissolved Oxygen
9 °C	9.9	12.3 mg/L

Appearance of Sample:
Dirty

Time of 2nd Portion of Composite Sample	8:59

Appearance of Sample:
Dirty

Time of 3rd Portion of Composite Sample	9:30

Appearance of Sample:
Dirty

Comments:

Names of Samplers
Caleb Matchack
Steven Brender

Exhibit 6 – Storm Water Data Collection sheet showing 1/18/06 composite sample collected as three aliquots within one hour (i.e., from 8:35 to 9:30 AM).

WG 3/20/08

Apr 11 2006 12:55PM HP LASERJET FAX p.6

BES

3. RESULTS

3.1.1 Sample and Testing Summary

Client Sample Identification	BES Sample #	Sample Dates	Sample Times	Log-In Sample Temp. (°C)
R1	23103	03/20/2006	NA	11.50
R2	23104	03/20/2006	NA	11.00
R3	23105	03/20/2006	NA	10.00
R3	23106	03/20/2006	NA	11.00
R4	23107	03/20/2006	NA	10.00

Exceed 4°C

NA – Not Available

3.1.2 Summary Of Sample Water Chemistry – These values represent the water quality of the samples as received at the BES laboratory.

NO WC
NO RBI

Water Chemistry Parameter	Sample Identification				
	R1	R2	R3	R4	R5
D.O. (mg/L)	12.80	12.90	11.50	11.80	11.80
pH	7.90	7.80	7.80	7.80	7.80
Conductivity (µS/cm)	151	150	176	146	163
Salinity (ppt)	0.10	0.10	0.10	0.10	0.10
Temperature (°C)	11.50	11.00	10.00	11.00	10.00
Total Chlorine (mg/L)	0.04	0.04	ND	0.04	0.05
Ammonia (ppm as N)	0.05	0.18	0.23	0.23	0.23
Alkalinity (mg/L as $CaCO_3$)	48	46	46	52	48
Hardness (mg/L as $CaCO_3$)	58	54	54	54	74

ND – Not Detected (Detection Limit = 0.03)

3.1.3 Sample Test Duration Summary

Test	*C. dubia*		*P. promelas*	
Time	Date	Time	Date	Time
Initiation	03/21/06	1545	03/21/06	1220
Termination	03/28/06	1630	03/28/06	1350

6

Exhibit 7 – Toxicity results page from Block Environmental Services demonstrating a failure to adequately preserve samples and the failure to analyze samples from the WC and Retention Basin monitoring stations.

WG 3/20/08

Performance and Effectiveness Evaluation

So how are we doing ?

Benchmark Exceedance Score: (No. of Direct Discharge BM Exceedances)	
2005-2006: 53	2006-2007: 38 (down by 28.3%)

Exhibit 8 – Excerpt from Port of Stockton May 23, 2007 PowerPoint Presentation to Central Valley Regional Water Board.

UO 3/20/08

Performance and Effectiveness Evaluation

So how are we doing ?

Benchmark Score by Outfall

SW YR	D2	D4	D7	D8	D10	D11	D15	RBI	WC	Total
05-06	7	7	3	3	10	6	7	7	3	53
06-07	5	3	No discharge	3	5	5	10	3	4	38

Exhibit 8 (continued) – Excerpt from Port of Stockton May 23, 2007 PowerPoint Presentation to Central Valley Regional Water Board.

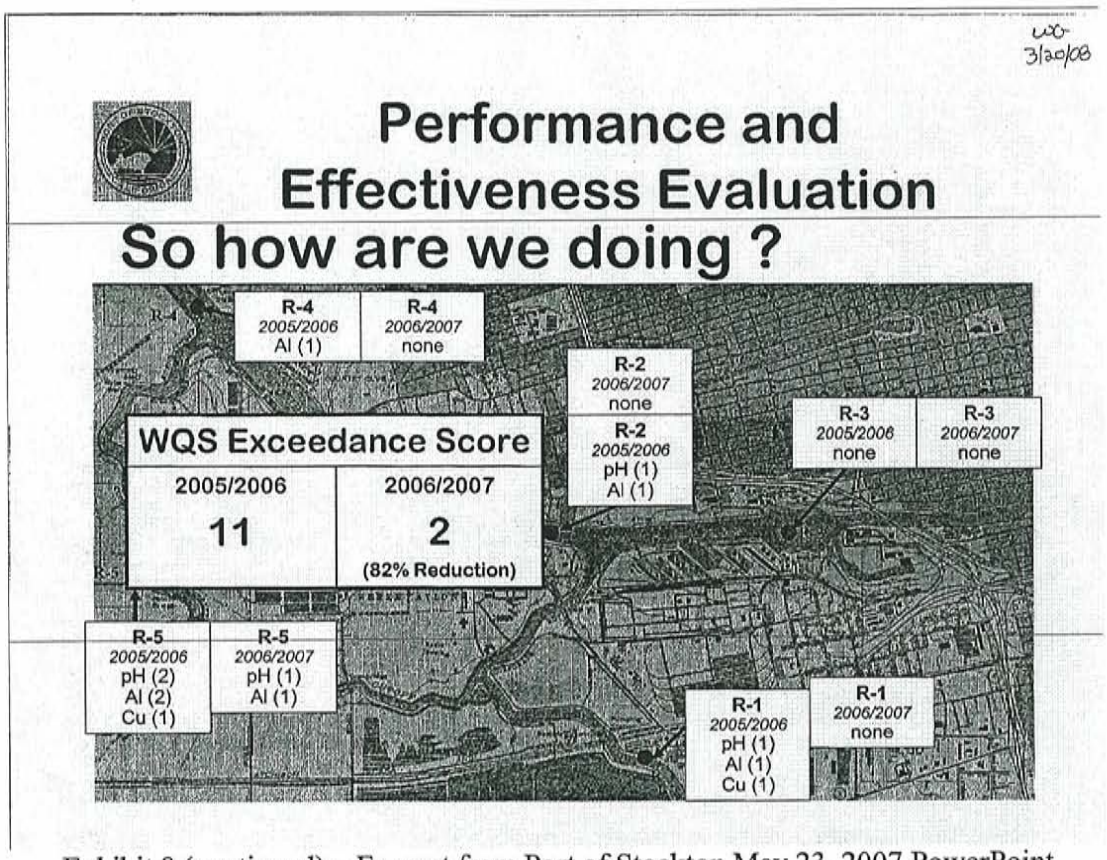
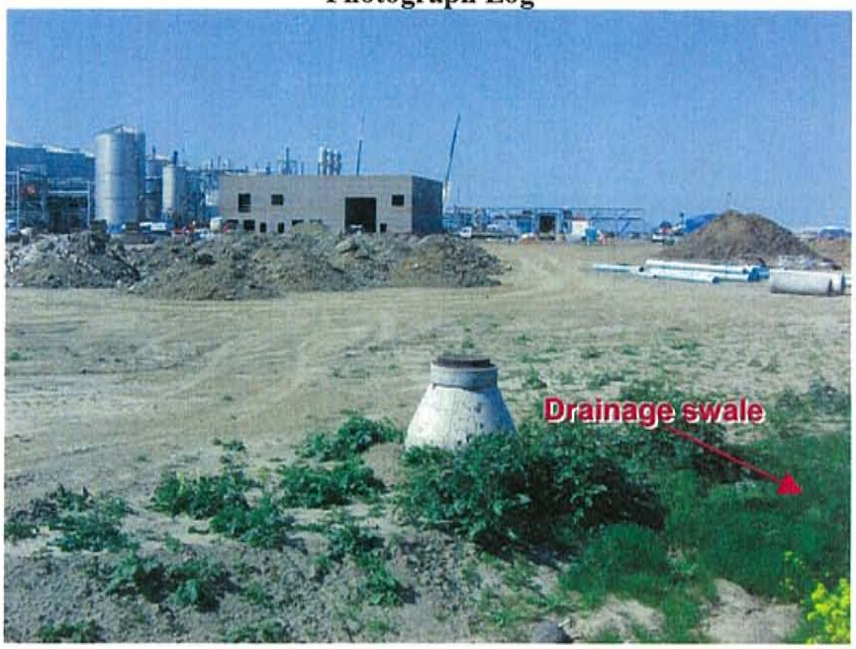


Exhibit 8 (continued) – Excerpt from Port of Stockton May 23, 2007 PowerPoint Presentation to Central Valley Regional Water Board.

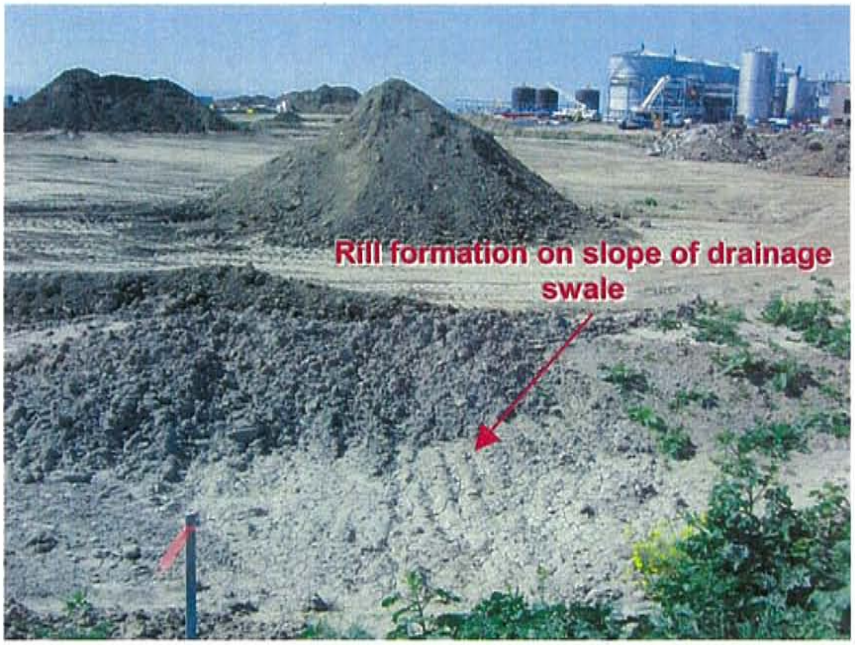
Port of Stockton - Municipal Separate Storm Sewer System (MS4)
(Order No. R5-2004-0136)
Photograph Log

Photograph 1: An actively disturbed slope located adjacent to a drainage ditch along Navy Drive and southeast of the construction site entrance.

Photograph 2: BMPs were not implemented between the slope and the adjacent drainage channel or in the disturbed drainage channel itself, and the surface of the slope was not stabilized.

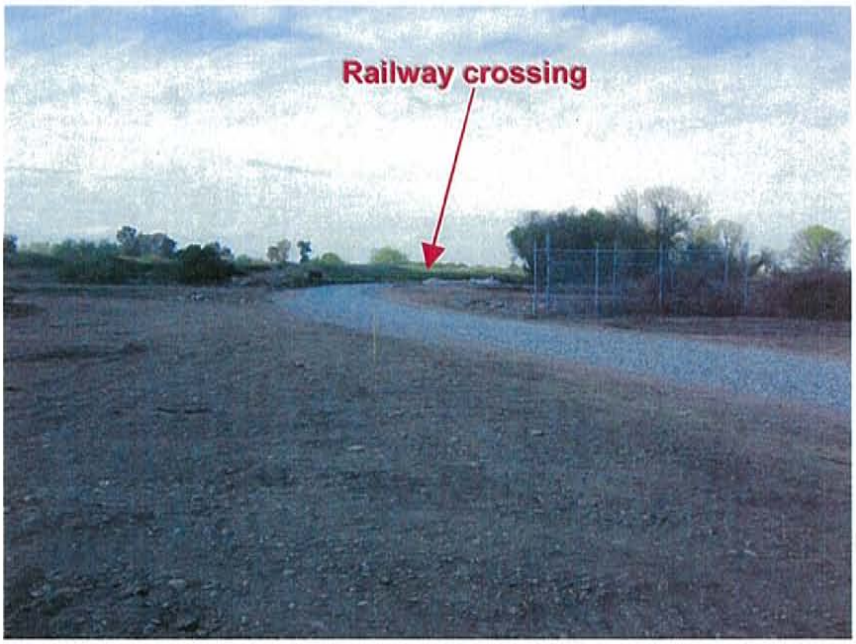


Photograph 3: BMPs were not implemented between a large expanse of disturbed soils, a number of uncontrolled soil stockpiles, and the adjacent drainage swale.



Photograph 4: Evidence of erosion was observed; including rill formation on the slope of the drainage swale.

Photograph 5: Pacific Ethanol storm drain outfall into the drainage channel along Navy Drive.



Photograph 6: Location of the new railway crossing spanning a unnamed waterway north of the construction site entrance off Humphreys Drive.

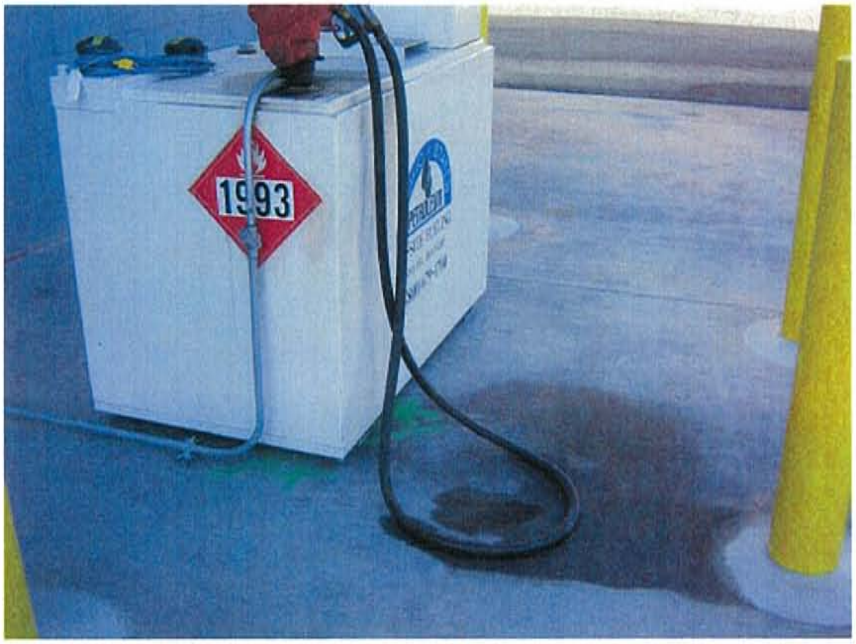
Photograph 7: BMPs were not implemented between the disturbed area on the northeast side of the railway crossing and the adjacent unnamed waterway.

Photograph 8: Run-on control BMPs were not implemented between the disturbed area on the southwest side of the railway crossing and the adjacent unnamed waterway.

Photograph 9: A mobile fueling truck was actively leaking diesel fuel, and the source of the leak had not been addressed.

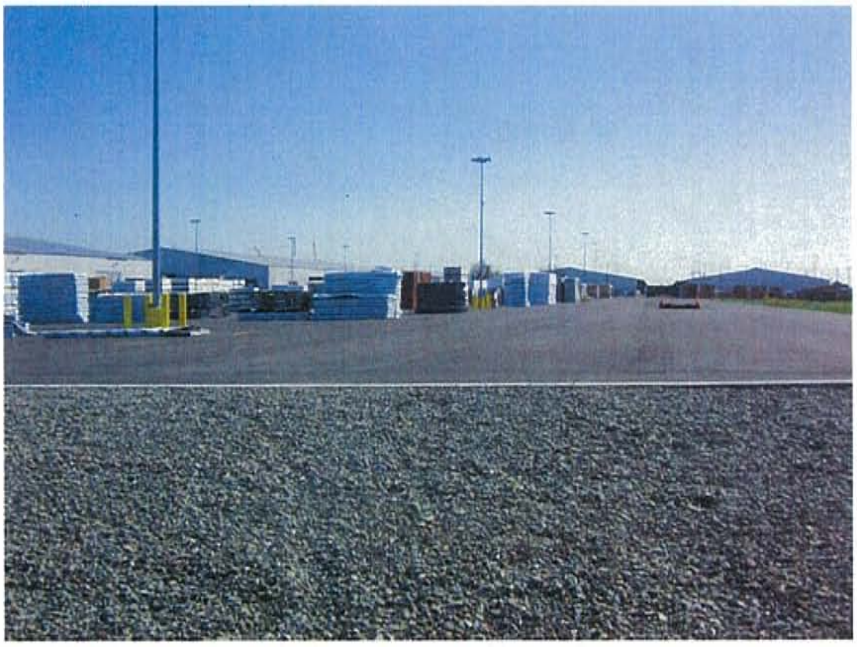
Photograph 10: In a follow-up audit activity on March 20, 2008, soil stockpiles were still located in a drainage pathway and temporary perimeter controls had not been installed.

Photograph 11: View of Lowe's Distribution Center equipment maintenance shop.



Photograph 12: View of Lowe's Distribution Center fuel storage tank located adjacent to the maintenance shop.

Photograph 13: Impervious parking improvements at the Lowe's Distribution Center (looking north).



Photograph 14: Impervious parking improvements at the Lowe's Distribution Center (looking east).

Photograph 15: Newly constructed warehouse structure and impervious parking improvements at the Ferguson Distribution Center (looking east).

Photograph 16: Newly constructed parking improvements at the Ferguson Distribution Center (looking south).