

**Comments on the US Gypsum Draft Environmental Impact Statement for the  
Development of the US Gypsum Proposed Wallboard Plant to Be Located on  
Port of Stockton West Complex**

Submitted by  
G. Fred Lee PhD, BCEE and Anne Jones-Lee PhD  
G. Fred Lee & Associates  
El Macero, California  
Ph 530 753-9630  
gfredlee@aol.com www.gfredlee.com

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US Gypsum, Inc. (USG) proposes to construct a wallboard manufacturing plant at the Port of Stockton (Port) Rough and Ready Island West Complex (West Complex). As part of obtaining permits to construct this facility, USG and the Port must develop a draft environmental impact statement (DEIR) to present and discuss the public health and environmental quality impacts that would be associated with construction and operation of this facility. In July 2008 USG released a DEIR for this project, which is under review at this time. Presented herein are our comments on the adequacy of this DEIR in providing the requisite comprehensive, reliable discussion of the potential impacts of the USG-proposed wallboard manufacturing plant on public and worker health and the environment.

California Environmental Quality Act (CEQA) requirements for full disclosure set forth in Title 14, California Code of Regulations, Chapter 3. *“Guidelines for Implementation of California Environmental Quality Act,”* Article 10. *“Considerations in Preparing EIRs and Negative Declarations,”* Section 15143. “Emphasis” states:

*“The EIR shall focus on the significant effects on the environment. The significant effects should be discussed with emphasis in proportion to their severity and probability of occurrence.”*

The USG-proposed facility would be located in an area that had been used by the US Navy. That use resulted in extensive pollution of the soils and groundwater in part of the Rough and Ready Island West Complex. At this time the full extent of the existing pollution is not known. However, based on our experience in working on hazardous chemical sites at several locations, the existing pollution of the areas of interest could be expected to be characteristic of a “Superfund” -like site where the soils and groundwater would require extensive investigation and remediation prior to any future use in order to protect public and worker health, and groundwater and environmental quality.

CEQA Title 14, Chapter 3, Article 10, Section 15151. “Standards for Adequacy of an EIR,” states,

*“An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account*

*of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.”*

As discussed in the attached summary of our qualifications to provide these comments, we have had extensive experience in reviewing draft EIRs/EISs on proposed projects on behalf of the public interest. We have also been responsible for developing an EIR for Cache Creek projects that have the potential to adversely affect public health and the environment due to existing and potential chemical pollution of the Creek by mercury (see Lee (2002) and Lee and Jones-Lee (2002a)). We have been, and continue to be, involved in review of public health and environmental quality impacts of US federal Superfund Sites, as well as “superfund” sites in California, other states, and Canadian provinces. **Based on our experience, the USG DEIR for the proposed wallboard manufacturing plant on the Port of Stockton West Complex falls far-short of complying with CEQA requirements for full disclosure of the potential environmental issues and impacts of the development and operation of the proposed project.**

The DEIR for the proposed project makes broad statements about the potential impact of several aspects of the proposed project, indicating that the project could have a significant environmental impact, but concluding that these possible impacts would not reach the level of “significant impacts.” However the discussion in the DEIR does not provide the information needed to evaluate whether the Port and USG have properly analyzed the proposed project for its impacts or for the ability of potential mitigation approaches to reduce the impact to “less than significant.” This DEIR needs to be redone to provide full disclosure on these issues. Presented herein is a summary of some of the most significant deficiencies in the USG DEIR for the proposed project.

In his review of the adequacy of the USG DEIR for the proposed project, Matt Hagemann of Soil/Water/Air Protection Enterprise (SWAPE) (Hagemann 2008) presented a fairly detailed discussion of many of the hazardous chemical concerns and other issues regarding the USG-proposed project that should have been discussed in the USG DEIR, but were not. The Hagemann review provides important information on the need for a full disclosure of potential environmental impacts of the USG proposed project to be provided in the DEIR and in the final EIR.

### **Comments on Specific Issues in DEIR**

Page 2-11 of the Project Description of the DEIR provides background information on the proposed project. That section states,

*“Construction of the U.S. Gypsum Project would require approximately 6,000 gallons of water per day for five months, in total approximately 1.8 AF of water. Three 2,000-gallon trucks would deliver water to the site and control dust, as required. This water would be taken from the nonpotable water system.”*

Page 3-104 states in the section devoted to Construction Impacts to Water Quality,

*“Construction of the U.S. Gypsum Project would require approximately 6,000 gallons of nonpotable water per day for five months for concrete and dust control.”*

Page 3-104 also states,

*“U.S. Gypsum would construct an approximately five-acre temporary storm water basin west of the site for the main wallboard line. The basin would be at a lower elevation than the proposed earthmoving activities and would collect runoff from the construction areas and allow sediment to settle. The basin would discharge storm water to the Port’s collection system, as allowed by the General Construction Storm Water Permit.”*

No information is provided on the source of, and potential pollutants in, what it termed, “nonpotable” waters. Without such information, it is not possible to evaluate the potential public health or environmental quality impacts associated with the use of that “nonpotable” water in the development of the USG wallboard project. It appears that the source of the nonpotable water is the Deep Water Ship Channel. This water is of poor quality that can lead to contamination of the areas where the nonpotable water is used. Stormwater runoff from these areas would contain pollutants derived from the land application and runoff of nonpotable water. Of particular concern is the use of that water for dust control during construction activities. Such use could add a wide variety of chemical pollutants and pathogenic organisms to soils, contaminants and pathogens that enter stormwater runoff from the areas on which the nonpotable waters are applied. There is no assurance that those pollutants would be effectively contained by the temporary stormwater detention ponds that USG proposes to construct as part of developing the wallboard project. Those pollutants could also pass through the Port’s stormwater management measures, if any, for runoff from the West Complex. Overall, the use of “nonpotable” water in developing the wallboard project could lead to pollution of the waters receiving the discharge from the Port’s storm drain system. A credible DEIR for the proposed project must reliably discuss and evaluate these issues.

On Page 3-103 of the “Environmental Analysis,” under “3.8.4.1 Significance Criteria,” a number of potential impacts are noted that could be of environmental significance for “water quality and hydrology.” Page 3-104 states in “3.8.4.2 Impacts to Water Quality and Hydrology Addressed in the West Complex EIR” in the “Construction Impacts to Water Quality,”

*“Impact USG HYD 1: The U.S. Gypsum Project would contribute to, but not exceed, the potentially significant and mitigable construction-related impacts to water quality and storm drain capacity, including potential erosion, sedimentation, and releases of fuels or other hazardous materials, considered in West Complex EIR Impact 4.7.1.”*

However, the discussion that follows that statement does not provide the technical analysis to support the assessment of the potential impact of the USG wallboard plant construction activities. Without such information it is not possible to evaluate the appropriateness of the statement. This type of information is essential in a certifiable DEIR that complies with CEQA requirements for full disclosure.

Page 3-104 states,

*“The Port would require U.S. Gypsum to develop Best Management Practices (BMPs) to prevent storm water containing quantities of products, waste, hazardous materials and other pollutants with the potential to impact storm water quality from entering the Port’s storm water system.”*

Without a sound discussion of the wide array of potential pollutants that could be present in stormwater runoff from the project during construction, and of the ability of so-called BMPs proposed for use to reliably control the release of pollutants off-site, it is not possible to properly evaluate the USG statement.

Page 107 states,

*“U.S. Gypsum would have to develop and submit a SWPPP in conjunction with its General Industrial Stormwater Permit. As required by the permit, the project operators would sample runoff at the existing sampling points during initial rain events to detect the presence of contaminants in the discharge and develop measures to prevent impacts to water quality.”*

Page 3-107 states,

*“MM USG HYD 3.2: As required in West Complex EIR MM 4.7.3b, U.S. Gypsum shall incorporate BMPs into its drainage plans to maximize water quality, achieve maximum contaminant removal, and ensure no net increase in contaminant releases in comparison with pre-project conditions. These measures shall include BMPs to prevent any storm water containing quantities of U.S. Gypsum products, waste, hazardous materials or other pollutants with the potential of negatively impacting storm water quality from entering the Port’s storm water conveyance system. These BMPs shall include:*

- Installing small settling, treatment, and/or infiltration devices beneath employee parking areas to provide initial filtration prior to discharge;*
- Installing roof drains that drain to natural surfaces or swales where possible to avoid excessive concentrations and channelization of storm water;*
- Labeling storm system drains, catch basins, and inlets to indicate that only storm water is allowed and that the drain flows to the Delta;*
- Placement of trash enclosures on impervious surfaces and surrounded by a screen or a wall to prevent wind blown trash and debris;*
- Construction of floor surfaces with materials that are compatible to the materials being loaded and unloaded from the site; and*
- Incorporate into site design a location for storage of spill response equipment for materials stored or used at the facility. Information on how to respond to a spill shall be posted at the facility.”*

We have been involved in evaluating the effectiveness of urban and industrial stormwater regulatory approaches and management approaches (BMPs) typically used and allowed by agencies to monitor stormwater runoff and to control pollutants in this runoff since the mid-1960s. Our Stormwater Runoff Water Quality Newsletters NL 3-2, 3-3, 6-2, 6-6, 7-6/7, 9-6, and 10-8 discuss the ability of conventional stormwater runoff so-called BMPs to treat stormwater sufficiently to prevent exceedances of water quality standards in the BMP discharges. These newsletters are available on our website at, <http://www.gfredlee.com/newsindex.htm>. Such violations can readily impair the beneficial uses of the receiving waters from the BMP-treated stormwater runoff. Table 4.7-1 in the Port’s West Complex DEIR presents what it describes as typical, expected percent removal of selected pollutants by conventional BMPs. That table shows that detention basins will allow from 20 to 70% of the pollutants to pass through the BMP without being removed. These released residuals can readily cause pollution of the waters receiving stormwater runoff treated with such a BMP.

It is well known that current approaches for stormwater management, such as those listed in the DEIR, do not necessarily control the environmental quality impacts of chemical constituents in urban and industrial stormwater runoff. Statements such as those quoted above claiming sufficiency of complying with regulatory requirements as currently implemented, are superficial and do not adequately inform decision makers or the public about the potential impacts of chemicals in stormwater runoff. The unreliability of conventional “BMP” for providing meaningful pollution control from stormwater runoff is well-understood and is the basis for current efforts to improve monitoring and management of urban and municipal stormwater runoff. A credible DEIR would discuss the potential pollutants in stormwater runoff from the project area, specific proposed approaches to control those chemicals in the site’s stormwater runoff, the adequacy of current regulatory requirements to control release of pollutants to the environment, and the potential impacts of the pollutants that could pass through the treatment units on environmental quality.

Page 3-85 in section 7. Hazards and Hazardous Materials states,

*“WCDP construction activities could result in potential interference with on-going soil and/or groundwater contamination clean-up activities (West Complex EIR Impact 4.11.2). This impact would be reduced to less than significant through project-specific review by the Port and other appropriate regulatory agencies (i.e., Department of Toxic Substance Control (DTSC), RWQCB, San Joaquin County Environmental Health Department (SJCEHD), and Stockton Fire Department) to ensure that the development maintains easements and access for operation of investigative or remedial systems.”*

Current regulatory approaches for soil and groundwater remediation do not necessarily control impacts of chemicals in soils and groundwater to no-impact conditions. It is our experience that conventional BMP “remediation” approaches, while meeting current regulatory approaches, cannot be relied upon to necessarily prevent adverse impacts for as long as there will be residual chemicals left in the soils and groundwaters. In order to provide Full Disclosure in a DEIR, these issues should be evaluated and discussed.

Page 3-85 states,

*“The West Complex EIR found the exposure of individuals to Polychlorinated biphenyls (PCB) (West Complex EIR MM 4.11.7) would be less than significant because the Navy removed all PCB equipment or contaminated equipment containing PCB levels of 50 ppm or greater in 1990. No mitigation was required.”*

As noted in the attached summary of experience, I (Lee) have been involved in investigating the occurrence and impacts of PCBs since the late-1960s. This involvement has included reviewing and developing criteria for assessing the impacts of PCBs on public health and the environment. It is known that the 50 ppm soil residual concentration allowed is not necessarily protective of public health and the environment. ITRC (2005) conducted a review of PCB concentrations used by states in evaluating excessive PCBs in soils. It reported, *“For residential soil, the states reported screening values ranging from 0.089 ppm to 0.43 ppm, varying around the (US EPA) Region 9 PRGs. The health-based screening values for PCBs in industrial soils ranged from*

0.0028 to 2.1 mg/kg.” (mg/kg = ppm). Those values are far-less than the 50 ppm cited by the Port and USG as acceptable PCBs in soil for the USG wallboard plant soils.

With respect to protecting aquatic life and human health from excessive bioaccumulation of PCBs in fish, the US EPA (2005) has adopted Polychlorinated Biphenyls (PCBs) water quality criteria of 0.014 µg/L to protect aquatic life from PCB toxicity, and of 0.000064 µg/L to prevent excessive bioaccumulation of PCBs in fish that would cause the fish to be hazardous to consume. The latter criterion value is about 800 million times smaller than the 50 mg/L (ppm) value that USG and the Port propose to allow to be discharged in stormwater to the San Joaquin River (SJR). As discussed by Lee and Jones-Lee (2002, 2004) some fish in the SJR and Delta already have excessive concentrations of PCBs and are not considered safe for consumption. There could readily be elevated concentrations of PCBs in the stormwater discharges that USG and the Port propose to discharge to the SJR DWSC.

Deficiencies in the current regulatory approach for PCBs should have been discussed in this DEIR. Without this information, reviewers of the DEIR are not fully informed about the threat that the PCBs in the soils at the USG project area represent.

Section, “Contaminated Soils or Ground Water” on Page 3-87 of the Environmental Analysis section presents a discussion of the potential impacts of the chemicals in the soil and groundwater on the proposed UGS wallboard plant. That section states, *“Portions of the U.S. Gypsum lease site and Port substation site contain areas with contaminated soils and ground water that are being remediated.”*

That section further states,

*“Impact USG HAZ 1: As considered in West Complex EIR Impact 4.11.1 and 4.11.2, construction activities for the U.S. Gypsum plant, related facilities, and on-island utilities could encounter unanticipated contaminated soil or ground water, but the project would not interfere with existing soil and ground water remediation activities at the site, and compliance with West Complex EIR mitigation would prevent significant impacts from contaminated materials.”*

As discussed by Hagemann (2008), at this time the regulatory agencies (CVRWQCB and DTSC) recognize the need for additional substantial studies to evaluate the amount and significance of pollutants in soils and groundwaters. Until this information is available and remediation approaches for each of the pollutants in each area have been approved by the regulatory agencies and reviewed by the public, it is not possible to conclude that *“West Complex EIR mitigation would prevent significant impacts from contaminated materials.”*

The following statements were made in the DEIR,

*“Based on the Navy documentation and Port investigations conducted in compliance with West Complex EIR MM 4.11.1a, no areas of contaminated soil or ground water are located where U.S. Gypsum would construct its main manufacturing facilities, including the rock storage building, main board line, warehouse, kiln, and office. U.S. Gypsum would cover these areas with fill and elevate them above the 500-year floodplain. Thus, construction activities for the main manufacturing facilities would not encounter contaminated soil or ground water or interfere with Port remediation actions. Similarly, based on the previous investigations, no contaminated soils or ground water have been identified at the sites for the hopper, dust collector, or conveyor line.*

*Approximately 19.1 acres in the western portion of the U.S. Gypsum lease area contain nine installation restoration (IR) sites identified by the Navy. Figure 3.7-1 identifies this area as “Port Remediation Area.” The remediation area is at a lower elevation than the eastern portion of the lease, and construction activities for the proposed U.S. Gypsum structures would occur in areas not likely to encounter contamination from these remediation sites. Other than the guardhouse, no U.S. Gypsum structures would be located in the Port Remediation Area.”*

With regard to using contaminated dredged sediment from Roberts Island to fill the USG plant area, Hagemann (2008) stated,

*“We do note that the proposed development would involve the placement of up to 10.5 feet of fill materials above the current grade to an elevation above the 500-year floodplain (DEIR, p. 2-10). The DEIR states (p. 3-87):*

*Based on the Navy documentation and Port investigations conducted in compliance with West Complex EIR MM 4.11.1a, no areas of contaminated soil or ground water are located where U.S. Gypsum would construct its main manufacturing facilities, including the rock storage building, main board line, warehouse, kiln, and office.*

*“Construction crews would raise the location for the rock storage shed approximately 3.5 feet above sea level and paper storage building, manufacturing facilities, office, warehouse, and loading and unloading areas to a finished elevation approximately 10.5 feet above sea level, above the level of the 500-year flood designation, as required by U.S. Gypsum criteria. U.S. Gypsum would obtain up to 750,000 cubic yards of fill from the Port’s dredge placement site at Roberts Island. Approximately 214 daily truckloads of fill would occur six days a week for four and one-half months from Roberts Island, following House Road, North Inland Drive, Charter Way, and Port of Stockton Expressway to the lease site.”*

As discussed by Hagemann (2008), placing polluted dredged sediments from Roberts Island on the USG plant area has the potential to cause highly significant worker/public health and environmental quality problems that should have been discussed in the DEIR. From the discussion provided in the DEIR it is not possible to evaluate how well USG and the Port understand the potential public health and environmental consequences of using large amounts of highly contaminated dredged sediment as fill on the USG plant area. A proper discussion of these issues would provide detailed description and discussion of the adequacy of, the proposed approaches for controlling those impacts.

Page 3-89 states,

*“MM USG HAZ 1.1: As required by West Complex EIR MM 4.11.1a, U.S. Gypsum shall develop through consultation with the DTSC, RWQCB, SJCEHD, and the Stockton Fire Department a contingency plan to dispose of any contaminated soil or groundwater.” and*

*“MM USG HAZ 1.2: As required by West Complex EIR MM 4.11.1b, if unidentified contaminated soil and/or groundwater is encountered or if suspected contamination is encountered during any construction activities, work shall be halted in the area, and the type and extent of the contamination shall be identified. A qualified professional, in consultation with appropriate regulatory agencies (i.e., DTSC, RWQCB, SJCEHD, and Stockton Fire Department) shall then*

*develop an appropriate method to remediate the contamination. If necessary and allowed, a remediation plan in conjunction with continued construction shall be implemented. In addition, a contingency plan to dispose of any contaminated soil or groundwater shall be developed through consultation with the DTSC, RWQCB, SJCEHD, and the Stockton Fire Department.”*

Page 3-90 states,

*“Impact USG HAZ 4: The proposed U.S. Gypsum Project would contribute to, but not exceed, the potentially significant and mitigable impacts from exposure to hazardous materials considered in West Complex EIR Impact 4.11.5, but compliance with regulatory requirements would prevent significant impacts to workers and the environment.”*

This is another of the numerous conclusionary statements presented in the USG DEIR that state that while potentially significant impacts could occur their impacts would be mitigated to less than significant impacts, without technical support. This approach falls far short of CEQA requirements for full disclosure.

Page 3-91 states,

*“a) The West Complex EIR determined that construction of WCDP projects would result in less than significant impacts to water quality and storm drain capacity through the use of BMPs described in the adopted mitigation measures and compliance with the National Pollution Discharge Elimination System (NPDES) General Permit for Discharges of Stormwater Runoff Associated with Construction Activity (General Construction Permit), the Port’s NPDES permit, and local ordinances. As a requirement of the General Construction permit, U.S. Gypsum would prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) to contain construction contaminants on site.”*

As discussed in these comments, achieving compliance with current stormwater regulatory requirements does not mean that the discharges will not adversely impact environmental quality in the receiving waters for the stormwater discharge. These issues need to be adequately and reliably discussed in the DEIR to provide full disclosure.

Page 12 states,

*“b) The West Complex EIR found that the effects of increased drainage flows from the addition of impervious surfaces at the WCDP projects could be mitigated through the development of a master drainage plan and additional detention basins. The adopted mitigation measures size the detention basins to result in no net increase in peak stormwater discharge, with standards developed on a project-specific basis. The SEIR will evaluate U.S. Gypsum’s plans to manage stormwater runoff through the use of an on-site detention basin, which would be used during construction and the initial period of operation. Ultimately, the project would discharge into a new stormwater detention basin that the Port is planning to construct to contain the additional runoff associated with WCDP projects.”*

As discussed above, a credible DEIR would discuss the fact discharges during below “peak flow” periods can also adversely impact receiving water characteristics. These issues are well-known in the stormwater runoff water quality literature as presented in Stormwater Management Center at, <http://www.stormwatercenter.net/>.



Page 12 c states,

*“c) The West Complex EIR determined that the implementation of the WCDP would have less than significant impacts to water quality in adjacent receiving waters with the use of BMPs identified in the programmatic document. The Port holds a Municipal NPDES Permit issued by the Regional Water Quality Control Board (RWQCB). The Port has prepared a SWPPP and operates a Port wide Municipal Storm Water Management Program which includes tenant involvement.*

*The SEIR will evaluate the specific BMPs that would be implemented for the proposed project. U.S. Gypsum would operate under a General Industrial Permit that requires stormwater discharges not violate any applicable water quality standards and the control of pollutant discharges use the best available and best conventional pollutant control technologies.”*

The general Municipal Storm Water Permit that has been issued to the Port does not prevent adverse impacts of pollutants in stormwater runoff “treated” by so-called BMPs that are allowed under this permit. The available research does not indicate that, even after the implementation of the BMPs listed in the Port’s EIR, no polluted stormwater will be discharged. Substantial levels of pollutants in storm water are still likely to occur at the Port. The Port’s monitoring data demonstrate that, even with whatever BMPs are in place under their municipal storm water permit, levels of pollutants will be in excess of applicable water quality standards and published EPA storm water benchmarks when discharged in the Port’s storm water.

The DEIR for the proposed project should discuss the fact that there is a wide variety of pollutants in waters that are not regulated by water quality standards. In addition, some of the current water quality standards are out-of-date and, as a result, do not ensure protection of the environment. These issues should have been discussed in this DEIR to adequately inform decision-makers and the public about the potential impacts of the proposed project. A DEIR should discuss the characteristics of the water quality monitoring program that USG would conduct to ensure compliance with the requirement of no violation of water quality standards under all flow conditions. Achieving such compliance will require a comprehensive monitoring program for all the potential pollutants that could be present in stormwater runoff from the USG property.

Hagemann (2008) provided information on the following issues,

1. Investigations of hazardous waste sites have not received agency approval
2. A soil management plan has not been prepared
3. Fill materials may pose risks to construction workers
4. Impact of fill material placement on groundwater has not been evaluated
5. Contaminants from storm water detention basin may contaminate groundwater
8. Seismic impact to levees is inadequately discussed

He points out that the DEIR is significantly deficient in providing information on each of these issues. For example, Hagemann (2008) summarized the current information on the pollutants that have been identified thus far in various areas of the West Complex. Further Hagemann points out that the CVRWQCB has not approved the “preliminary endangerment assessments (PEAs).” Hagemann states,

*“In summary, according to the RWQCB, none of the PEA reports have been approved. Site 8, to the west of the proposed project area has been closed. Reports for RWQCB review are needed for Sites 4 and 19 and a workplan to address data gaps is needed for Site 49.”*

The DEIR has overstated the current situation with respect to the degree of investigation and regulatory agency approval of permits for development of the USG project.

Hagemann (2008) stated, *“A soil management plan has not been prepared.”* Without an approved soil management plan, there cannot be any soil disturbance at the site. This should have been discussed in the DEIR for the proposed USG project.

Hagemann (2008) states, *“No assessment of potential human health impacts has been conducted, with particular attention to construction worker exposure from activities that involve movement of the fill as described in the DEIR (p. 2-11):...”*

Since the fill soils are from an area that contains highly polluted dredged sediments this issue should have been discussed in the DEIR.

Hagemann (2008) states, *“The DEIR should be revised to include a discussion of how this deadline is to be met or if amended Waste Discharge Requirements will be necessary. If amended Waste Discharge Requirements are necessary, the revised DEIR should identify how the continued placement of the fill at the Roberts Island site, where it is not covered with impermeable surfaces, does not jeopardize underlying groundwater quality.”*

As discussed above, the potential for the highly polluted fill proposed to be used at the USG plant West Complex site to pollute groundwater quality, and alter groundwater flow direction and velocity, as well as the ability of the current groundwater remediation to accomplish cleanup, should have been discussed in the DEIR since these issues could influence the impact of the proposed USG wallboard plant on the environment.

Hagemann (2008) states, *“The DEIR should be revised to include basic information about the detention basin design as identified above.”* "No information is provided on essentially every key factor necessary to evaluate the environmental implications of the storm water detention basin, including but not limited to whether it would be built completely or partly in fill to be deposited at the site; if not on fill, how deep the basin would extend; whether or not the basin is expected to intercept groundwater; with what materials the basin would be constructed; what size storm events the basin would be capable of containing and for how long; whether the basin would be lined or unlined; what rate of percolation might occur through the bottom of the basin; how the basin would be maintained including the rate of sedimentation (if any) in the basin and; where collected sediment would be disposed. Without this information it is not possible to evaluate the potential effectiveness of these basins in removing pollutants in the stormwater that enters the basin. Deficiencies in these systems to accomplish their goals are well known and should be discussed in an full disclosure EIR.

Hagemann (2008) states, *“Accumulated sediment may be contaminated. No information is provided in the DEIR or supporting documents about how accumulated sediment would be tested for possible contamination.”*

The testing and evaluation of the characteristics of sediments that accumulate in the stormwater detention basins and the management/disposal of these sediments should be discussed in the DEIR.

He further states, “*Water detained in the basin may serve as a source of contamination to underlying groundwater.*” This is another important issue that must be discussed in a credible DEIR for this proposed project.

He states, “*Water infiltrating from the detention basin may impact groundwater plumes.*”

*“In summary, the location of the detention basin needs to be clarified in a revised DEIR along with the identification of any impacts that infiltrating water from the basin would have on underlying soil and groundwater contamination. The water in the infiltration basin should be sampled along with underlying groundwater to ensure that beneficial uses of the groundwater are not jeopardized. Plans for sampling potentially contaminated sediment that accumulates in the basin should be included in a revised DEIR along with design plans for the basin. Additionally, given restriction on land use, necessary steps to comply with the Consent Agreement should be identified in the DEIR.”*

We agree that all of these issues should be discussed in a DEIR in order to comply with CEQA requirement of Full Disclosure.

Hagemann (2008) states, “*However, the DEIR provides no assessment of current levee conditions and makes no evaluation of how strong shaking would affect the levees in their current condition. The DEIR should be revised to include an engineering evaluation of the levees and their ability to withstand strong seismic ground shaking that would result from the Magnitude 6 earthquake that is predicted to hit the Bay Area in the next 30 years (West Complex EIR, p. 6-21).*”

The susceptibility of the levees on the West Complex should be discussed as part of assessing the appropriateness of the project as proposed by USG.

The Central Valley Regional Water Quality Control Board’s comments on the Port’s draft EIR for the West Complex development raised several issues that have not been adequately addressed in the final version of the West Complex EIR. Several of these issues are applicable to the USG DEIR for the development of the wallboard plant. A summary of these issues is presented below.

### **CVRWQCB Stormwater Issues**

The CVRWQCB staff stated in comments submitted on the Programmatic EIR prepared for the West Complex,

*“In order to reduce impacts from storm water discharges, the DEIR has proposed into [sic] construct a retention basin and perform BMPs. Staff noted that the applicants has a storm water permit for the East Complex (Port of Stockton). The East Complex has a retention basin and has implemented BMPs similar to those listed in the DEIR. However, monitoring data submitted for the East Complex indicate that storm water discharges exceed water quality objectives for a number of constituents. Therefore, the BMPs proposed for the project may also not meet water quality objectives and would increase pollutant loading from storm water runoff. Finally, based on the removal efficiency listed in the DEIR, the proposed mitigation measures are not sufficient*

*to reduce loading related to the project. The applicant must propose additional BMPs in an effort to meet water quality objectives.”*

The failure to achieve water quality standards in the discharge from an existing retention basin is to be expected and has significant implications for the ability of USG’s proposed retention/detention basins to comply with water standards in runoff from the USG wallboard plant area. This issue should have been addressed in the DEIR for the proposed USG project.

### **Failing Sewer System**

The CVRWQCB staff stated in comments submitted on the Programmatic EIR prepared for the West Complex,

*“The DEIR indicates that the sewer system on Rough & Ready Island experiences problems from inflows and infiltration (I&I). Collection systems with I&I problems are more likely to have sewage spills and can substantially increase the hydraulic loading discharged to the POTW. In addition, leaky sewer lines may degrade the underlying groundwater.*

*In order to maintain the groundwater elevation on the island, the site uses a system of reclamation ditches to drain the shallow groundwater. The collected water flows via gravity to a pump station and is subsequently pumped to the river. The reclamation ditches may also intercept seepage from failing sewer lines or the contaminated groundwater. Therefore, wastewater may be discharged via the reclamation ditches to surface waters. The applicant has proposed to conduct a phased assessment of the sewer lines. Ideally, no new sewer connections should be made for each phase of the project until the applicant has certified the repairs identified in the assessment have been completed.”*

Likewise, the Programmatic EIR for the West Complex acknowledges the inflow and infiltration problem with the Complex’s sewer system:

*As discussed in Section 4.12, Public Services and Utilities, the wastewater conveyance system on the project site is known to suffer from an inflow and infiltration (I&I) problem. This could result in sewage leaks reaching groundwater and/or surface waters, potentially impairing beneficial uses and violating water quality standards.*

Programmatic DEIR, p. 2-29 (Env’t Impact 4.7.4). *See also id.*, p. 4.7-19.

In order to mitigate impacts from leaking sewage, the Programmatic EIR established a mitigation measure requiring that, *“Prior to major project-specific development, the Port shall perform an assessment of the wastewater conveyance system. This may be performed as part of a Master Plan for development of the Project Area.”*

*Id.*

The Programmatic EIR explains the mitigation measure further at p. 4.7-19-20:

*Prior to major project-specific development, the Port shall perform an assessment of the wastewater conveyance system. This may be performed as part of a Master Plan for development of the Project Area. The assessment will isolate leaks in the sewer system, establish the ability of the system to convey sufficient flow throughout the island, and identify any areas where upgrades,*

*replacement, and/or rehabilitation is necessary to support projected flows and to conform with the Stockton Municipal Code and the City of Stockton Department of Public Works Standard Specifications (current edition). The assessment shall include, and the Port shall implement, a schedule that implements system improvements prior to or concurrent with new development and/or increased intensity of land use such that it does not exceed the capacity of the on-site system, and the I&I problem is eliminated prior to the generation of increased wastewater flows.*

Despite the call for a sewer line assessment and resulting repairs, no mention of any such assessment or repair program is evident in the USG DEIR. *See, e.g.* USG DEIR, p. 3-97. The project will add an estimated 4.48 acre-feet of wastewater to the West Complex's degraded sewer system. Programmatic DEIR, p. 3-154-55. Despite the discussion and mitigation measure included in the Programmatic EIR, the USG DEIR provides an entirely contradictory assertion, claiming, "[t]he waste water collection system does not suffer from any deficiencies and would not require upgrades to service the proposed project." *Id.*, p. 3-155. This is a glaring inconsistency between the current USG DEIR and the Programmatic DEIR from which it purports to tier. These are important issues that must be addressed in the USG DEIR. The Port and/or USG should be required to provide the requisite sewer assessment, certify that the leaky sewers have been repaired, and fully discuss these measures in the USG DEIR.

### **Cumulative Impacts**

The CVRWQCB staff's comments submitted on the Programmatic EIR prepared for the West Complex explain,

*"The Delta waterways are listed pursuant to Clean Water Act (CWA) section 303(d) as impaired for chlorpyrifos, DDT, diazinon, Group A pesticides, mercury, unknown toxicity and has recently been listed for pathogens near the Port of Stockton turning basin. A portion of the Delta is listed for electrical conductivity, and low dissolved oxygen causes impairment in the DWSC from Channel Point to Disappointment Slough. Because the project may contribute listed pollutants, the applicant should consider the cumulative impacts the project may have on the water body from each waste."*

Based on the characteristics of the proposed project and especially the highly limited approach that USG proposes for control pollutants at the site, the hazardous chemical site characteristics of the USG, and current water quality problems in the receiving waters for the stormwater runoff from the project, the DEIR must include a reliable comprehensive analysis of the cumulative impacts of the project and discussion of how those impacts would be mitigated. No such analysis is apparent in the DEIR. Attached is a list of Drs. G. Fred Lee and Anne Jones-Lee publications devoted to Delta and the SJR watershed water quality issues that need to be considered in evaluating the potential cumulative impacts of the proposed USG wallboard plant project.

### **References**

Hagemann, M. "Comments on U.S. Gypsum Wallboard Manufacturing Project Lease Approval at the Port of Stockton, Draft Supplemental Environmental Impact Report, Stockton, California," Report of SWAPE Santa Monica, California September (2008).

CVRWQCB, “Review of Draft Environmental Impact Report for West Complex Development, Port of Stockton, San Joaquin County,” letter to G. Palmer Port of Stockton by Central Valley Regional Water Quality Control Board Rancho Cordova, CA January (2004).

ITRC, White Paper “Examination of Risk-Based Screening Values and Approaches of Selected States.”, Interstate Technology & Regulatory Council Risk Assessment Resources Team, Washington, DC, December (2005).

<http://www.itrcweb.org/Documents/RISK-1.pdf>

Lee, G. F. and Jones-Lee, A., “Organochlorine Pesticide, PCB and Dioxin/Furan Excessive Bioaccumulation Management Guidance,” California Water Institute Report TP 02-06 to the California Water Resources Control Board/Central Valley Regional Water Quality Control Board, 170 pp, California State University Fresno, Fresno, CA, December (2002a).  
<http://www.gfredlee.com/OCITMDLRpt12-11-02.pdf>

Lee, G. F., “Water Quality,” Chapter 4.6 of Yolo County’s Supplemental Environmental Impact Report for the Cache Creek Resources Management Plan and Cache Creek Improvement Program County of Yolo Planning and Public Works Department, Woodland, CA (2002).

Lee, G. F. and Jones-Lee, A., “Review of Yolo County Lower Cache Creek Water Quality,” Report of G. Fred Lee & Associates, El Macero, CA (2002b). Available as WQ 003 from [gfredlee@aol.com](mailto:gfredlee@aol.com).

Lee, G. F. and Jones-Lee, A., “Excessive Bioaccumulation of Organochlorine Legacy Pesticides and PCBs in California Central Valley Fish,” Made available at US EPA, California OEHHA and ATSDR 2004 National Forum on Contaminants in Fish, Report of G. Fred Lee & Associates, El Macero, CA, January (2004).

<http://www.gfredlee.com/Runoff/OCI-slides-SanDiego.pdf>

USEPA “National Recommended Water Quality Criteria” United States Office of Water Environmental Protection Office of Science and Technology 2006 Agency (4304T) Washington DC (2005). <http://www.epa.gov/waterscience/criteria/wqctable/index.html>

### **Selected Publications on Delta Water Quality Issues**

G. Fred Lee and Anne Jones-Lee

In 2004 Lee and Jones-Lee developed the first comprehensive discussion of Delta water quality issues. That review is available at:

Lee, G. F. and Jones-Lee, A., “Overview of Sacramento-San Joaquin River Delta Water Quality Issues,” Report of G. Fred Lee & Associates, El Macero, CA, June (2004).

<http://www.gfredlee.com/SJR-Delta/Delta-WQ-IssuesRpt.pdf>

Lee, G. F., and Jones-Lee, A., “Overview—Sacramento/San Joaquin Delta Water Quality,” Presented at CA/NV AWWA Fall Conference, Sacramento, CA, PowerPoint Slides, G. Fred Lee & Associates, El Macero, CA, October (2007).

<http://www.gfredlee.com/SJR-Delta/DeltaWQCANVAWWAOct07.pdf>

Information on water quality in the SJR and its watershed is available in:

Lee, G. F. and Jones-Lee, A., "San Joaquin River Water Quality Issues," Report of G. Fred Lee & Associates, El Macero, CA, June (2006).

<http://www.gfredlee.com/SJR-Delta/sjr-WQIssues.pdf>

Lee, G. F., and Jones-Lee, A., "Water Quality Issues of Irrigated Agricultural Runoff/Discharges—San Joaquin River, Central Valley, California," Presented at *Agriculture and the Environment* - 2007 Conference, Central Coast Agricultural Water Quality Coalition, Monterey, CA, November (2007).

<http://www.gfredlee.com/SJR-Delta/SJR-WQ-Ag-Monterey.pdf>

Lee, G. F., and Jones-Lee, A., "Potential Water Quality Impacts of Agriculture Runoff/Discharges in the Central Valley of California," Presented at Central Coast Agricultural Water Quality Coalition's 2007 National Conference on Agriculture & the Environment, Monterey, CA, PowerPoint Slides, G. Fred Lee & Associates, El Macero, CA, November (2007).

<http://www.gfredlee.com/SJR-Delta/SJRAgImpactsMontereyNov2007.pdf>

Information on SJR DWSC low-DO studies is available:

Lee, G. F. and Jones-Lee, A., "Synthesis and Discussion of Findings on the Causes and Factors Influencing Low DO in the San Joaquin River Deep Water Ship Channel Near Stockton, CA: Including 2002 Data," Report Submitted to SJR DO TMDL Steering Committee and CALFED Bay-Delta Program, G. Fred Lee & Associates, El Macero, CA, March (2003). <http://www.gfredlee.com/SJR-Delta/SynthesisRpt3-21-03.pdf>

Lee, G. F. and Jones-Lee, A., "Supplement to Synthesis Report on the Low-DO Problem in the SJR DWSC," Report of G. Fred Lee & Associates, El Macero, CA, June (2004). <http://www.gfredlee.com/SJR-Delta/SynthRptSupp.pdf>

A copy of our PowerPoint slides for the presentation that we recently made at the CALFED Science Conference is available as:

Lee, G. F., and Jones-Lee, A., "Delta Nutrient-Related Water Quality Problems," PowerPoint Slides Presented at CALFED Science Conference, Sacramento, CA, October 24, (2008). [http://www.gfredlee.com/SJR-Delta/CALFED\\_SciConf10-08.pdf](http://www.gfredlee.com/SJR-Delta/CALFED_SciConf10-08.pdf)

That presentation summarized key issues that were presented last March at the Delta Nutrient Water Quality Modeling Workshop, which we organized on behalf of the California Water and Environmental Modeling Forum. The PowerPoint slides of the presentations made by the invited speakers at that workshop, and our synopsis of the workshop, are available at: <http://cwemf.org/Calendar/index.htm>.

We publish an approximately monthly "Stormwater Runoff Water Quality Newsletter" which we distribute at no cost to the 10,000 or so on our email mailing list. Some of the newsletter topics include discussion of Delta water quality issues. An index to past editions of the Newsletter and the past Newsletters that have been sent over the past 11 years are available at: <http://www.gfredlee.com/newsindex.htm>.

Newsletter Volume 10 Number 10/11, October 18, 2007 was devoted to: Water Resource and Quality Crisis Issues in Sacramento San Joaquin Delta, CA. That Newsletter is available at <http://www.gfredlee.com/Newsletter/swnewsV10N10-11.pdf>



### **Qualification to Make Comments**

Dr. G. Fred Lee earned a Master of Science in Public Health degree from the University of North Carolina in 1957 and a PhD degree in environmental engineering with a minor in aquatic chemistry from Harvard University in 1960. For 30 years he held university graduate-level faculty positions in environmental engineering/water quality through which he taught, conducted research, and provided public service and private consulting, in numerous aspects of the impact of chemical contaminants on water quality. During his university career he conducted more than \$5 million in water quality research and published over 500 papers and reports on his research and related activities. In 1989 he retired from university teaching and research, and expanded his part-time public service and private consulting to a full-time activity through his firm, G. Fred Lee & Associates. Since that time he has published another 600 papers and reports on his various activities. Many of his papers and reports are available on his website, [www.gfredlee.com](http://www.gfredlee.com).

Dr. Anne Jones-Lee earned her Bachelor of Science degree in biology from Southern Methodist University in 1973 and her PhD degree in environmental sciences from the University of Texas at Dallas in 1978. She held university graduate-level teaching and research positions for 11 years until 1989 when she joined G. Fred Lee & Associates in full-time consulting. She and Dr. G. F. Lee have worked together as a team since the mid-1970 and have co-authored numerous papers and reports.

Dr. Lee has been involved in evaluating potential water quality impacts of urban and agricultural stormwater runoff and its control since the mid-1960s. He has published extensively on these issues; many of his more recent papers and reports are available on his website at, <http://gfredlee.com/pswqual2.htm#runoff>. He and Dr. Jones-Lee contribute to and publish their approximately monthly, email-based Stormwater Runoff Water Quality Newsletter. Now in its 11th year of publication, it is made available free of charge to approximately 10,000 people; past issues are available online at <http://www.gfredlee.com/newsindex.htm>. These Newsletters discuss various timely topics of stormwater runoff water quality issues including the effectiveness of the so-called BMPs that are used to try to treat stormwater runoff to remove pollutants. As noted in the comments above, our Stormwater Runoff Water Quality Newsletters provide an extensive discussion of the Lee, G. F., "Water Quality," Chapter 4.6 of Yolo County's Supplemental Environmental Impact Report for the Cache Creek Resources Management Plan and Cache Creek Improvement Program County of Yolo Planning and Public Works Department, Woodland, CA (2002).

Dr. G. F. Lee has been involved in investigating hazardous chemical sites for four decades. He and Dr. Jones-Lee are highly involved in working on behalf of the public in investigating hazardous chemical sites at several locations in the US and Canada. Their papers and reports on Superfund and non-Superfund sites area are available online at, <http://www.gfredlee.com/phazchem2.htm>.

Drs. G. F. Lee has been active in numerous aspects of the development and review of water quality criteria/standards since the mid-1960s. He served as an invited peer-reviewer for the National Academies of Science and Engineering "Blue Book," "Water Quality Criteria – 1972" (NAS/NAE, 1973). He led the professional review and critique of the US EPA "Red Book" water quality

criteria for phosphorus on behalf of the Water Quality Section of the American Fisheries Society, and served as a member of the PCB criteria panel (Lee et al., 1979). He also served as a US EPA-invited peer-reviewer for the water quality criteria development approach incorporated in the US EPA “Yellow Book” of water quality criteria (US EPA, 1987). That criteria development approach is still in use today. A summary of Drs. Lee and Jones-Lee’s work in the development, evaluation, and use of water quality criteria and standards is available on their website at, <http://www.gfredlee.com/exp/wqexp.htm>.

Drs. Lee and Jones-Lee have been involved in studies on water quality issues in the Sacramento San Joaquin Delta since 1989. A summary of that work is available online at, <http://www.gfredlee.com/psjriv2.htm>. An area of their particular emphasis has been water quality issues in the San Joaquin River Deep Water Ship Channel near Rough and Ready Island.

Dr. Lee has been involved in evaluating the potential environmental impacts of PCBs for many years. A summary of that work is available online at, <http://www.gfredlee.com/HazChemSites/PCBExperience.pdf>

Drs. Lee and Jones-Lee have had considerable experience in the review of the adequacy of draft EIRs to conform to CEQA requirements for full disclosure of the potential environmental impacts of proposed projects. That work has typically been conducted on behalf of the public that is concerned about the potential impact of a proposed project. Examples of their work on these issues are available on their website in the Specific Examples section located at, <http://www.gfredlee.com/plandfil2.htm#examples>.