

UNITED STATES GYPSUM COMPANY EXPANSION/MODERNIZATION PROJECT

IMPERIAL COUNTY, CALIFORNIA

FINAL ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STATEMENT

Volume I

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Lead Agencies:

CEQA
County of Imperial
El Centro, California

NEPA
Bureau of Land Management
El Centro Field Office

JANUARY 2008

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JANUARY 2008

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Executive Summary

ES.1 Introduction

This Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) has been prepared in compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) to inform the public and to meet the needs of local, State, and Federal permitting agencies to consider the project proposed by United States Gypsum Company (USG). Its purpose is to address the environmental impacts of the expansion/modernization of the existing USG gypsum processing and wallboard manufacturing facility and gypsum quarry in the Imperial County, California.

ES.2 CEQA/NEPA Compliance

The final processes for completion of CEQA and NEPA are described separately below:

CEQA

The County of Imperial (County) is the CEQA Lead Agency. To certify the Final EIR/EIS, the County must find that:

- the Final EIR/EIS has been completed in compliance with CEQA; and
- the Final EIR/EIS was presented to the decision-making body of the lead agency, and the decision-making body considered and reviewed the information contained in the Final EIR/EIS prior to approving the project; and
- the Final EIR/EIS reflects the lead agency's independent judgment and analysis (State CEQA Guidelines, Section 15090).

After the County certifies the Final EIR/EIS, the County may decide whether and how to approve the Project and must adopt findings of fact regarding the significant effects identified in the Final EIR/EIS (State CEQA Guidelines, Sections 15091-15093).

NEPA

The Bureau of Land Management (BLM) is the NEPA Lead Agency. The Final EIR/EIS will be filed with the U.S. Environmental Protection Agency (EPA), and the Notice of Availability (NOA) will be published in the Federal Register announcing the availability of the Final EIR/EIS. After a minimum 30-day waiting period, BLM will issue a Record of Decision (ROD) stating the decision and describing the alternatives considered; the environmentally preferred alternative; the factors considered with respect to the alternatives, environmental commitments, and mitigation measures to be applied to the action; any monitoring and enforcement program to be established; any significant comments received on the Final EIR/EIS; and responses to those comments.

ES.3 Public Review and Consultation Process

In accordance with both the specific requirements and the intent of CEQA, the environmental review process for the proposed Project has included substantial opportunities for public and agency review and comment on the environmental evaluations. As a result of the degree of public interest in the Project, a substantial number of comments were submitted on the Draft EIR/EIS during the public review period. Approximately 557 comment letters were submitted. In addition, commenters presented verbal comments at the scoping meeting. Written comments are contained in Section 5.0, Response to Comments, of this Final EIR/EIS.

The public comments received did not change the analyses or conclusions regarding environmental impacts of the Project presented in the Draft EIR/EIS. Instead, the input resulted in the adoption of some modification of mitigation measures described in the Draft EIR/EIS. These modified mitigation measures are included in Table ES-1.

The majority of submitted comments were general in nature and expressed concern regarding traffic, hydrology, air quality, and noise, as well as potential effects on area roads and compatibility of the Project with agricultural use and biological concerns. Few of these commenters asked questions that had not already been evaluated in the Draft EIR/EIS. Individual responses are in Section 5.0 and are also cross referenced to specific collective responses in Section 4.0 for clarification and consistency.

These general concerns are collectively addressed as summarized responses in Section 4.0, Collective Responses. Clarification on the environmental evaluations and recommendations in the Draft EIR/EIS is provided.

A number of agencies, organizations, businesses, and individuals submitted specific comments or opinions based on review of the Draft EIR/EIS. The majority of these comments requested clarification on specific points addressed, while some provided suggestions on the evaluation of impacts and determination of specific mitigation measures. Replies to comments from agencies, businesses and organizations are provided in Section 5.0. Responses to individuals whose concerns were representative of public comment or who had detailed questions or suggestions regarding the Project are presented in Table 5.0-2, Private Citizens.

ES.4 Proposed Project

The proposed Project is modernization/expansion of USG's manufacturing facilities at its Plaster City Plant (Plant) and gypsum quarrying operations at its Plaster City Quarry (Quarry) that supports the Plant. A new 10-inch diameter water pipeline 8.5-miles long would replace the worn 8 inch water pipeline from the wells at Ocotillo to the Plant. The new 10-inch pipe would provide a more reliable water supply, minimizing line surges and associated leaks/ruptures, providing a quicker water system recovery after waterline breaks/leaks or maintenance, and improving fire protection at the Plant. Installation of an approximate 14.4 megawatt (MW) cogeneration unit is also proposed to provide heat to the Plant to dry wallboard as well as provide electrical power for the Plant. This unit would be sized to provide electrical power for the entire Plant while delivering waste heat to the No. 3 kiln to assist in drying wallboard, reducing the amount of heat needed by the kiln. The natural gas would be delivered through the existing pipeline.

Part of the modernization/expansion Project includes an off-specification material recycling system. This system is designed to chop up out-of-specification wallboard from the Inert Material Storage Area (IMSA) and feed it back into the Plant production process with raw gypsum rock.

The proposed Project at the Quarry consists of the improvements already made to the crushing and loading facilities plus additional components identified here. A new production water well (for on-site activities), proposed Well No. 3, would be drilled and water transported by a pipeline installed alongside of the existing alignment of the narrow-gauge railroad to the Quarry facilities. In conjunction with the development of the pipeline, USG would install an electric supply to serve the well pump. The proposed Project also includes a reclamation plan for the extent of USG mineral holdings.

Federal policy favors maintaining a viable mining industry for the development of domestic mineral resources. To help assure satisfaction of the nation's industrial and security needs, federal policies encourage private enterprise in the economic development of domestic mineral resources. The Mining Law of 1872 (20 USC 22 *et seq.*) opened the public lands to exploration and development, granting a person who discovers valuable mineral deposits the right to extract and sell these minerals. This policy was reaffirmed in the Mining and Minerals Policy Act of 1970 and the National Materials and Minerals Policy, Research and Development Act of 1980. The 1970 Legislation stated that an "economically sound" mining industry was important for both economic and national security reasons. The 1980 Act noted the need to encourage mineral exploration. Quarrying of gypsum has been occurring at the Plaster City Quarry since 1921. USG has been quarrying gypsum at the site since 1946.

ES.5 Project Location

Regional Location

Imperial County is within the Colorado Desert, marked by land with relatively low elevations, some areas even below sea-level. The western portion of Imperial County is characterized by a series of low lying mountain ranges opening to the Salton Sea and Imperial Valley.

Plant

USG produces wallboard and related gypsum products at the Plaster City Plant located at 3810 West Highway 80, Plaster City, California, approximately 18 miles west of the City of El Centro. Access to the Plant is via Highway 80, immediately north of Interstate 8.

Water Supply

Water for processing and manufacturing purposes at the Plaster City Plant is currently delivered via an 8-inch diameter pipeline from a well field located approximately 8 miles west of Plaster City in the Ocotillo-Coyote Wells Groundwater Basin (Basin). USG proposes the replacement of this existing aging pipeline with a new pipeline.

Quarry

The Quarry and ore crushing facilities supplying the raw material to the Plant are located approximately 26 miles north of Plaster City, at the Plaster City quarry.

Lands used for mining by USG encompass approximately 1,640 acres of private lands and 380 acres of claims on federal lands currently administered by the BLM and 28 acres of mill sites. USG has applied for patenting of these claims.

The Quarry is located at 7801 Split Mountain Road near Ocotillo Wells. Access to the Quarry is via State Highway 78 from San Diego County and Imperial County. The Quarry is approximately 9 miles south of the intersection of Highway 78 and Split Mountain Road.

Transport of ore from the Quarry and crushing operation to the Plant is via a USG owned narrow-gauge railroad.

ES.6 Project Objectives

USG's Objectives

The overall goals of the Proposed Action are to:

- Maximize use of known resources;
- Expand production facilities, equipment and personnel; and
- Maximize the return on capital investment.

The Proposed Action consists of three (3) general components: (1) the Plaster City Plant upgrade and expansion; (2) the increased water usage for quarrying and processing purposes; and (3) the expansion of the mining operation at the Plaster City Quarry. The applicant's objectives in these three areas are as follows:

Plant

- Meet current and future residential and commercial building products demand in the southwestern United States.
- Fulfill estimated operational design life of the Plant.
- Replace an older, less-efficient production line with a new state-of-the-art high speed wallboard line.

- Provide continued employment for people in a sparsely populated County where industrial jobs are limited.

Water Supply

- Obtain an adequate water supply for operations.
- Potentially replace an old and leaky pipeline.
- Increase water usage to up to 767 acre-feet annually.

Quarry

- Secure permits and approvals on the Quarry containing high quality gypsum resources.
- Provide for an annual production level of 1.92 million tons per year (TPY).
- Maximize recovery of known gypsum reserves needed for the Plant to fulfill its estimated operational design life.
- Develop Quarry operations to limit disturbed areas.
- Implement a reclamation plan designed to minimize erosion, reestablish vegetation, reduce aesthetic impacts, and eliminate public safety concerns.
- Reclaim Quarry for post-mining uses including open space.

ES.7 Alternatives Considered

CEQA Guidelines Section 15126.6(c) provides for the selection of a range of reasonable alternatives. The range of potential alternatives to the Proposed Action included those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects.

Similarly, NEPA requires that an EIS identify and objectively evaluate a reasonable range of alternatives to a proposed action. Under both CEQA and NEPA, the selection of alternatives for discussion is governed by a “rule of reason.” The following alternatives to the Proposed Action were considered:

No Action Alternative

The No Action Alternative assumes that no element of the Proposed Action would be implemented. Specifically, no expansion/modernization of the Plant or Quarry, and no replacement of the existing water pipeline, would occur.

Partial Use of Water from Imperial Irrigation District

This alternative would supply the Plant with a portion of the water needed for operations from USG's existing wells in Ocotillo. The balance of the water needed for operations would be supplied by the Imperial Irrigation District (IID).

Under this alternative, water from IID would be blended with water from Ocotillo as needed to achieve the level of water quality and consistency necessary for use in manufacturing wallboard without the need for further treatment of the process water. As stated below, the quality of Colorado River water varies over time. Thus, the amount of water that USG would need to extract from the well at Ocotillo would vary over time. However, this alternative assumes that over the life of the Project, the amount of water extracted from the existing wells at Ocotillo would average 400 acre-feet per year (AF/Yr). Water in excess of 400 AF/Yr would be provided by IID under a water service agreement with USG (assuming such a water service agreement can be obtained).

This alternative would entail the construction and operation of a new water pipeline extending from the Westside Main Canal to the Plaster City Plant a distance of approximately 5.5 miles. The likely routes for the pipeline include: (1) along the north or south side of Evan Hewes Highway (S-80), or (2) the north side of the commercial railroad tracks that parallel Evan Hewes Highway.

In addition to the pipeline itself, this alternative would require the construction of a pumping station near the canal, access roads for the pipeline, and water storage facilities at the Plant. Storage and treatment facilities at the Plant would include two settling/storage basins such as 150 foot by 150 foot reservoirs on USG property to settle out silt and solids from the water prior to use. These settling/storage basins with a total capacity of about 1 million gallons would be located adjacent to the USG manufacturing facility on Plant property, most likely south of the Plant. From the settling ponds the water would be pumped to the manufacturing facility, blended with Ocotillo well water to further dilute impurities and used in the manufacturing process.

Under this alternative, once all of the approvals and improvements necessary to convey IID water to the Plant are completed, USG would continue to use water from the existing wells at Ocotillo at pre project levels. Assuming that all necessary approvals can be obtained to implement this alternative (including a service agreement with the IID), the process of obtaining these approvals would likely require a minimum of 1 to 3 years. Additionally, the construction of the pipeline and related improvements would require a minimum of 2 additional years. Thus, for purposes of evaluating the potential

environmental effects of this alternative, it is assumed that IID water would not be available for use at the Plant until at least 2010 or 2012.

Full Use of Water from Imperial Irrigation District

This alternative is similar to the partial use alternative discussed above, except that 100 percent of the water needed for Plant operations would be supplied by IID under a water service agreement with USG. This alternative would entail the construction and operation of a new water pipeline as described above in the Partial Use alternative extending from the Westside Main Canal to the Plant.

Water/settling storage facilities would be larger than that described above under the partial use alternative to provide the Plant with a 7 day on-site storage in the event of water delivery interruptions. Under this alternative, it is anticipated that there would be two settling/storage reservoirs, each would be about 225 feet by 225 feet. The storage capacity of each reservoir would be about 4.5 million gallons. Settling ponds would be utilized to settle solids out of the water and sized to store a 7 day supply of water for Plant operations. Water would also need to be filtered and treated to provide the Plant with potable water.

The quality of Colorado River water varies significantly over time. This variation in salinity creates a problem in the process of making wallboard. While a range of salinity can be managed by changing formulations to account for salinity changes, this cannot be accomplished quickly. In other words, the water used to manufacture wallboard must be maintained with a constant salinity or solids. In short, USG would need to treat Colorado River water not only if salinity levels are high, but simply because the levels vary. At times when the salinity levels are relatively low, it may be possible to use Colorado River water to manufacture wallboard in both the existing No. 1 board line and the new high speed No. 3 board line without further treatment. However, when salinity levels are relatively high, the water would not be suitable for use in the manufacture of wallboard unless it is first treated by Reverse Osmosis (RO). The treatment process would require the construction of a desalinization facility, along with wastewater treatment facilities to handle the wastewater from the RO process. It is assumed that the RO units could be limited to about one quarter of the flow and that the treated water would be blended with settled canal water to reach the acceptable levels of purity. For example, if the supply from IID were to be 866 AF/Yr it would be necessary to take in about 266 AF to the RO plant to produce 200 AF/Yr of low salinity water. This water would be blended with about 600 AF/Yr of settled canal water to

produce water acceptable for board manufacture. The waste stream would be 66 AF/Yr, which would require on-site evaporation ponds of about 11 acres.

In addition to the RO unit, a treatment facility would be needed to supply potable water for the Plant. While the quantity of water needed for this purpose is relatively small, the unit would require attention and service. The Plant would also be required to isolate the potable system from the industrial use supply system.

ES.8 Summary of Impacts and Mitigation Measures

The impacts of the proposed Project, proposed mitigation, and significance conclusions are discussed in detail in the Draft EIR/EIS, as revised in this document. Table ES-1 summarizes the revised impacts, mitigation measures, and levels of significance identified in this document (strike out and underlined).

**Table ES-1
Summary of Revised Potential Impacts and Mitigation Measures**

Potential Impact	LOS Before Mit	Mitigation Measures	LOS After Mit
Hydrology and Water Quality			
Increased pumping of USG wells could reduce water levels, increasing the cost of pumping groundwater and, causing some wells to go dry.	S	<p>Mitigation Measure 3.3-1: If the water level in a <u>an existing</u> well in the Ocotillo area decreases at a rate faster than one foot every eight years and the average water levels in the surrounding wells also decrease for more than two years in a row due to the Proposed Action, as measured from the interpolated linear of one foot every eight years with a starting reference point being the date that pumping by USG increases above the baseline rate, and there is a documented reduction in the available water to the affected user, then USG, at its election will:</p> <ol style="list-style-type: none"> 1. Rehabilitate the well and/or install a new pump to restore the prior pumping rate; or 2. Provide an incremental replacement of water equivalent to the amount of the reduced rate of pumping by the affected party, of a like quantity and quality, and provide reimbursement for the incremental increase for the affected party to pump the remaining available groundwater; or 4. Provide a full replacement water supply to the affected party of a like kind and quality, at a cost that does not exceed the cost to the affected party at the time the impact occurred; or 3. Deepen the existing well or provide a new replacement well to the affected party, drilled to a depth that will not be affected by existing or future Project-related declines in the water table, and capable of providing an equivalent quantity and quality of water that existed prior to the impact, and provide reimbursement for incremental increase in cost for the affected party to pump the available water. 	LS

Potential Impact	LOS Before Mit	Mitigation Measures	LOS After Mit
		<p>The extent to which the Proposed Action will be as contributing to cause the decrease in water levels in the Ocotillo area will be determined only after a review of the water level data and a decision by the Imperial County Planning Commission.</p> <p>The baseline condition in the Basin includes a declining water table, and existing data suggests that water levels recover slowly after significant drawdown occurs. Therefore, if USG elects to provide replacement water or a replacement water supply, arrangements must be made to provide this mitigation until groundwater levels stabilize at return to a level equal to the projected baseline condition or ten years after USG reduces its pumping from the Basin to the baseline rate, whichever first occurs.</p>	
<p>Increased pumping from USG wells could degrade water quality in individual wells due to lateral migration of higher-TDS water located to the east of Coyote Wells, lateral migration of higher-TDS water from areas near outcrops of Tertiary sediments, or vertical migration of water from or near Tertiary sediments underlying the alluvial aquifer throughout most areas of the basin.</p>	S	<p>Mitigation Measure 3.3-2: USG will provide an alternative or replacement source of water if the water quality significantly deteriorates in any <u>existing</u> well in the Ocotillo area and such deterioration is caused by the Proposed Action. As discussed above, the secondary drinking water standard for TDS is 500 mg/L and water with a TDS level in excess of 1,000 mg/L is considered non-potable. Therefore, if the <u>Proposed Action causes the</u> TDS level in any <u>existing</u> well <u>to</u> exceed 500 mg/L, or <u>causes</u> the concentration of any other measured parameter sulfate, chloride or boron, as described in the <u>Mitigation Groundwater</u> Monitoring Program below, to exceeds the drinking-water standard that is in force at the time of the measurement, <u>the Proposed Action is approved,</u> then USG will provide the affected party or parties with an alternative supply of water for drinking and cooking, at no cost to the affected party or parties. This alternative supply could be bottled water or a hookup to a replacement water source. If the TDS level in any well exceeds 1,000 mg/L and is caused by the Proposed Action, then the water quality will be such that use of the water for any domestic purpose will be significantly affected due to scale buildup, damage to plumbing, corrosion, and other similar impacts. If the TDS level exceeds 1,000 mg/L and is caused by the Proposed Action, USG will provide the affected party or parties with a hookup to a replacement supply of water. This replacement supply may be a hookup to an existing municipal district or other appropriate drinking water supply system. USG will bear the full cost of the hookup. The affected party or parties, however, would only be responsible for the annual cost of the replacement water equivalent to their costs to pump water prior to the occurrence of the impact. If the annual cost of water for the replacement supply exceeds the affected party or parties costs to pump water prior to the occurrence of the impact, USG will pay the incremental difference.</p> <p>The extent to which the Proposed Action will be considered as contributing to be the cause of the decrease in water quality in the Ocotillo area, will be determined only after a review of the water quality data and a decision by the Imperial County Planning Commission.</p>	LS

Potential Impact	LOS Before Mit	Mitigation Measures	LOS After Mit
		<p>The existing data from Ocotillo and Yuha Estates indicates that, once the water quality decreases, it may take many decades for the water quality to recover once the pumping causing the impact has ceased. Therefore, If USG will need is required to provide the alternative and/or replacement water supply pursuant to the terms of this mitigation measure, it must continue to do so until (1) concentrations of the above-listed constituents in excess of applicable water-quality standards return to levels below such standards or until the water quality parameters, for which there is data that currently exists, return to pre-Proposed Action levels, (2) ten years after USG reduces its pumping from the Ocotillo/Coyote Wells Groundwater Basin to the baseline rate, whichever first occurs.</p>	
<p>Increased pumping from USG wells could degrade water quality in the groundwater Basin due to lateral migration of higher-TDS water located to the east of Coyote Wells, lateral migration of higher-TDS water from areas near outcrops of Tertiary marine sediments, or vertical migration of water from or near Tertiary marine sediments underlying the alluvial aquifer throughout most areas of the basin.</p>	S	<p>As part of the Proposed Project, USG will implement the Groundwater Monitoring Program described below. The data from the groundwater monitoring program will provide an indication of a trend of progressively decreasing information concerning water quality in individual wells and throughout the basin, if such a trend occurs and is a result of the increased pumping for the Proposed Project. If such a trend is identified the data indicates a trend of progressively decreasing water quality in only a few wells in close proximity to the USG pumping wells, and an impact subsequently occurs in any or all of those few wells, then USG can mitigate the impacts in the individual wells as discussed above for Impact 3.3-2A: Water Quality Degradation at Plant Affecting Individual Well Owners. If, however, such a trend is identified in a larger number of wells, and these wells are located over a broader area of the basin and not just in the area of the USG pumping wells, it would not be possible to restore the Basin-wide water quality once it is degraded to concentrations at which the groundwater is no longer suitable for its current uses. There is insufficient recharge to restore the Basin and dilute the salts in the saline water. Therefore, it is not possible to mitigate the Basin-wide degradation of water quality. If such trends are detected by the Groundwater Monitoring Program, the only way to halt or reverse these trends would be to curtail pumping by reducing production at the Plant, or by implementing one or more Alternatives that reduce or eliminate withdrawals from the basin, prior to the groundwater quality being degraded to the point where it was no longer suitable for its current uses.</p>	S
Wildlife			
<p>Increased activity at the Quarry could disturb additional desert upland and wash habitats possibly having a negative impact on wildlife in the area.</p>	S	<p>Mitigation Measure 3.5-1d: Peninsular bighorn sheep: USG, in coordination with the BLM, shall initiate formal consultation with the US Fish and Wildlife Service under Section 7 of the Federal Endangered Species Act and implement the terms and conditions of the incidental take statement authorizing the project. The consultation process will result in the development of a Biological Opinion by the USFWS that will: (1) provide a statement about whether the proposed project is “likely or not likely to jeopardize” the continued existence of the species, or result in the adverse modification of critical habitat; (2)</p>	LS

Potential Impact	LOS Before Mit	Mitigation Measures	LOS After Mit
		<p>provide an incidental take statement that authorizes the project; and (3) identifies mandatory reasonable and prudent measures to minimize incidental take, along with terms and conditions that implement them.</p> <p><u>Mining shall be conducted only as approved in the Plan of Operation and the Mine Reclamation Plan. Reclamation shall be conducted concurrently with mining and it shall be initiated within each phase as soon as is feasible. Reclamation shall include slope contouring and revegetation with native plant species as specified in the Reclamation Plan.</u></p> <p><u>USG shall instruct its employees and other visitors to the mine to avoid peninsular bighorn sheep. Access to undisturbed lands by humans on foot shall be restricted, and usually would include only biologists and mining personnel. USG shall establish a training program, including new-employee orientation and annual refresher, to educate employees regarding bighorn sheep and the importance of avoidance.</u></p> <p><u>USG shall not allow domestic animals (cattle, sheep, donkeys, dogs, etc.) onto the mine site or any lands under USG control. Training for mine employees shall include instructions to report observations of domestic animals to the quarry's environmental manager. Upon receiving any such reports, the environmental manager shall contact the appropriate authorities for removal of domestic animals.</u></p>	
Cultural Resources			
The Proposed Action may affect unique prehistoric sites or artifacts in the potential impact area.	LS	<p>None required. If any archaeological resources are encountered during implementation of the Proposed Action, construction or any other activity that may disturb or damage such resources shall be halted, and the services of a qualified archaeologist shall be secured to assess the resources and evaluate the potential impact. Such construction or other activity may resume only after the archaeological resources have been assessed and evaluated and a plan to avoid or mitigate any potential impacts to a level of insignificance has been prepared and implemented.</p>	
The Proposed Action may affect historic sites or artifacts in the potential impact area.	S	<p>If any archaeological resources are encountered during implementation of the Proposed Action, construction or any other activity that may disturb or damage such resources shall be halted, and the services of a qualified archaeologist shall be secured to assess the resources and evaluate the potential impact. Such construction or other activity may resume only after the archaeological resources have been assessed and evaluated and a plan to avoid or mitigate any potential impacts to a level of insignificance has been prepared and implemented. An archaeologist qualified by the Society of Professional Archaeologists (SOPA) shall be deemed "qualified" for purposes of this mitigation measure. The services of a qualified archaeologist may be secured by contacting the Center for Public Archaeology — California State University, Fullerton or a member of SOPA.</p>	

Potential Impact	LOS Before Mit	Mitigation Measures	LOS After Mit
<u>Global Warming</u>			
<u>The proposed project will result in cumulative impacts to climate change.</u>	<u>S</u>	<u>USG has already acquired approximately \$1.6 million in emission credits for the Project to meet applicable air quality standards. Similarly, to the extent necessary, USG will acquire recognized carbon credits to offset the Project's increased GHG emissions.</u>	<u>LS</u>
LOS = Level of Significance		S = Significant or Potentially Significant	LS = Less than Significant

1.0 Introduction

1.1 PURPOSE

This Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS) has been prepared to describe the disposition of environmental issues raised in the comments received on the Draft EIR for the United States Gypsum Company (USG) Expansion/Modernization Project (U.S. Gypsum Project). The evaluation and response to public comments is an essential part of the full disclosure environmental review process for the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) and has been completed in accordance with California Public Resources Code Section 21000 *et seq.*, and 42 U.S.C. §4321 *et seq.*

1.2 FINAL EIR/EIS REQUIREMENTS

The Final EIR/EIS for the U.S. Gypsum Project has been prepared to provide responses to comments received. The response to comments may take the form of a revision to the Draft EIR or may be a separate section in the final document. In this case the Final EIR/EIS includes both.

The CEQA Guidelines (14 CCR Section 15132) require that the Final EIR/EIS shall consist of:

- The Draft EIR/EIS or a revision of the draft;
- Comments and recommendations received on the Draft EIR/EIS either verbatim or in summary;
- A list of persons, organizations, and public agencies commenting on the Draft EIR/EIS;
- The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and
- Any other information added by the Lead Agency.

This Final EIR/EIS has been prepared in a format in accordance with CEQA Regulations (40 CFR 1503.4(c)). This document should be used in conjunction with, rather than in place of, the Draft EIR/EIS. Therefore, this document, together with the Draft EIR/EIS,

fulfills State and County CEQA requirements for a complete Final EIR and Federal NEPA requirements for a Final EIS.

1.3 USE OF FINAL EIR/EIS IN DECISION-MAKING PROCESS

The EIR/EIS is an informational document designed to inform the public of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

The final processes for completion of CEQA and NEPA are described separately below:

CEQA

The County of Imperial (County) is the CEQA Lead Agency. To certify the Final EIR/EIS, the County must find that:

- the Final EIR/EIS has been completed in compliance with CEQA; and
- the Final EIR/EIS was presented to the decision-making body of the lead agency, and the decision-making body considered and reviewed the information contained in the Final EIR/EIS prior to approving the project; and
- the Final EIR/EIS reflects the lead agency's independent judgment and analysis (State CEQA Guidelines, Section 15090).

After the County certifies the Final EIR/EIS, the County may decide whether and how to approve the Project and must adopt findings of fact regarding the significant effects identified in the Final EIR/EIS (State CEQA Guidelines, Sections 15091-15093).

NEPA

The Bureau of Land Management (BLM) is the NEPA Lead Agency. The Final EIR/EIS will be filed with the U.S. Environmental Protection Agency (EPA), and the Notice of Availability (NOA) will be published in the Federal Register announcing the availability of the Final EIR/EIS. After a minimum 30-day waiting period, BLM will issue a Record of Decision (ROD) stating the decision and describing the alternatives considered; the environmentally preferred alternative; the factors considered with respect to the alternatives, environmental commitments, and mitigation measures to be applied to the action; any monitoring and enforcement program to be established; any significant comments received on the Final EIR/EIS; and responses to those comments.

The Final EIR/EIS will be used by the County and the BLM together with economic, social, and technical information, to decide on the discretionary entitlements requested. This Final EIR/EIS is being made available prior to hearings on project approval or denial to provide an opportunity for agency and public review of the complete Final EIR before decisions are made.

Mining activities on private land are regulated by the County in accordance with the Imperial County General Plan and other requirements. The County reviews proposed mining use permits and reclamation plans prior to considering approval of a project. The County is responsible for regulating the reclamation of mining operations, in accordance with the California Surface Mining and Reclamation Act of 1975 (SMARA) (California Public Resources Code Section 2710 *et seq.*).

Mining activities on federal lands are regulated under the Federal Land, Policy and Management Act (FLPMA), and in the California desert, subject to the California Desert Conservation Area (CDCA) Plan. In order to avoid duplication of effort, approval of a mining reclamation plan subject to SMARA is the responsibility of the County, subject to a Memorandum of Understanding between the BLM and the Department of Conservation.

The Project Application for a Plan of Operations and Mine and Reclamation Plan and related technical documents that were, in part, used in the preparation of the Draft EIR/EIS, and this Final EIR/EIS, were submitted by the Applicant to the County in 2003 and 2004. The Application and supporting documents are on file and available for public review at the Imperial County Planning Department. This Final EIR/EIS reviews the environmental consequences of the proposed activities on the Project sites, as described in the Application.

Upon review of the Final EIR/EIS, and prior to rendering decisions on the discretionary actions, the County must certify that:

- The Final EIR/EIS has been completed in compliance with CEQA;
- The Final EIR/EIS was presented to the decision-making body of the Lead Agency, and that the decision-making body reviewed and considered the information contained in the Final EIR/EIS prior to approving the Project; and
- The Final EIR/EIS reflects the Lead Agency's independent judgment and analysis.

Should applicable permits and Reclamation Plan approvals be granted by the County, a statement of findings would be made for each significant environmental effect of the Project, accompanied by a brief explanation of the rationale for each finding. Possible findings are that:

- Changes or alterations have been required in, or incorporated into, the Project to avoid or substantially lessen the significant environmental effects as identified in the Final EIR/EIS;
- Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency; and/or
- Specific economic, social, or other considerations make infeasible the mitigation measures or Project alternatives identified in the Final EIR/EIS.

In addition, the County would have to make a statement of overriding considerations if, in choosing to grant the Reclamation Plan and other approvals for the Project, it determines that significant environmental impacts remain. The statement of overriding considerations would set forth the specific reasons why the benefits of the Project outweigh the unavoidable significant environmental impacts. The statement of overriding considerations (if any) and the findings will be issued by the Imperial County Planning Commission concurrently with its decision at a public hearing.

At the time of its decision, the BLM will prepare a concise public ROD in accordance with the Council on Environmental Quality (CEQ) regulations at 40 CFR 1505.2. The record as appropriate, will:

- State the decision.
- Identify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives that were considered to be environmentally preferable.
- Identify and discuss relevant factors, including economic and technical considerations, agency statutory missions, and considerations of national policy that were balanced by the agency in making its decision.
- State whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not.
- Adopt a mitigation monitoring and enforcement program.

The ROD for the U.S. Gypsum Project will be issued by the BLM at least 30 days following publication of the Final EIR/EIS NOA in the Federal Register.

2.0 Public Review and Consultation Process

2.1 CIRCULATION OF DRAFT EIR/EIS

2.1.1 Purposes of Public Review

CEQA views public participation as an essential part of the environmental impact evaluation process. The purposes of public circulation and review of EIRs include:

- Sharing expertise;
- Disclosing agency analyses;
- Checking for accuracy;
- Detecting omissions;
- Discovering public concerns; and
- Soliciting counter proposals.

CEQA explains that the focus of the review should be on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project may be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. Reviewers should therefore explain the basis for their comments, and whenever possible should submit data or references in support of their comments (CEQA Guidelines, Section 15204).

CEQA (Cal. Pub. Res. Code Section 21082.2(b)) explains that, “Statements in an environmental impact report and comments with respect to an environmental impact report shall not be determinative of whether the project may have a significant effect on the environment.” According to CEQA, it is the responsibility of the decision makers of the Lead Agency to “determine whether a project may have a significant effect on the environment based on substantial evidence in the record.” “Substantial evidence” is defined as facts, fact-related reasonable assumptions, and expert opinion. Substantial evidence does not include arguments, speculation, unsubstantiated opinion or narrative, clearly erroneous evidence, or socioeconomic impacts not related to the

physical environment (Cal. Pub. Res. Code Section 21080(e), 21082.2(a), 21082.2(c), and Guidelines Section 15384).

2.1.2 Public Review Period and Notifications

In accordance with both the specific requirements and the intent of CEQA, the environmental review process for the U.S. Gypsum Project has included substantial opportunities for public and agency review and comment on the environmental evaluations. This extensive public review process is briefly summarized in the following paragraph.

The Draft EIR/EIS process included the following:

- An EIR/EIS Notice of Preparation (NOP) was distributed to the State Clearinghouse, responsible agencies, interested groups and individuals, and surrounding property owners for a 30-day comment period;
- Two Public Scoping Meetings were held;
- The Draft EIR/EIS was circulated for review;
- Copies of the Draft EIR/EIS were sent directly to responsible, trustee, and other State, Federal, and local agencies expected to have expertise or interest in the resources that may be affected by the proposed Project;
- In addition, copies were sent to organizations, businesses, and individuals with special expertise on environmental impacts and/or who had expressed an interest in this particular project, or other activities; and
- The Notice of Completion was filed with the State Clearinghouse.
- The comment period was extended by the County and BLM to July 17, 2006.

Notice of the availability of this Final EIR/EIS has been provided to agencies, organizations, and the public, who have expressed an interest in the project.

2.2 PUBLIC INPUT ANALYSIS

As a result of the degree of public interest in the Project, a substantial number of comments were submitted during the public review period. Approximately 557 comment letters were submitted. In addition, commenters presented verbal comments at the scoping meeting. Written comments (received as letter correspondence) are contained in Section 5.0, Response to Comments, of this Final EIR/EIS.

The public comments received did not change the analyses or conclusions regarding environmental impacts of the Project presented in the Draft EIR/EIS. Instead, the input

resulted in the adoption of some modification of mitigation measures described in the Draft EIR/EIS. These modified mitigation measures, along with other corrections to the Draft EIR/EIS, are included in Section 3.0, Draft EIR/EIS Errata, as well as being included in the appropriate comment responses in Section 5.0, Response to Comments.

As is common with Draft EIR/EIS circulation and review, many of the comments submitted were general in nature, and asked questions already answered in the Draft EIR/EIS evaluations. Other commenters asked for clarification on points addressed in the environmental evaluations, while some provided suggestions on the evaluation of impacts and determination of specific mitigation measures.

Comments received indicated that some reviewers disagree with the Draft EIR/EIS conclusions. Where specific points of disagreement were expressed by commenters concerning environmental issues, detailed responses have been prepared in this document.

2.3 APPROACH TO RESPONSES

2.3.1 General Issue Comments

The majority of submitted comments were general in nature and expressed concern regarding traffic, hydrology, air quality, and noise, as well as the potential effects on area roads and the compatibility of the Project with agricultural use and biological concerns. Few of these commenters asked questions that had not already been evaluated in the Draft EIR/EIS. Most of these general concerns were voiced in conjunction with opinions on project approval/denial. These concerns were anticipated, as these are the same issues that have been the focus of public interest since the initial public scoping process. Clarification on the environmental evaluations and recommendations in the Draft EIR/EIS is provided. Individual responses are in Section 5.0. They are also cross referenced to specific collective responses in Section 4.0 for clarification and consistency.

2.3.2 Specific Comments

The Draft EIR/EIS was circulated to numerous agencies, many having jurisdiction over natural resources that could be affected by the proposed Project, or having expertise or interest in environmental resources. In addition, interested organizations, individuals, and businesses received the documents or were noticed of their availability. A number of agencies, organizations, businesses, and individuals submitted specific comments or opinions based on review of the Draft EIR/EIS. The majority of these comments requested clarification on specific points addressed, while some provided suggestions on the evaluation of impacts and determination of specific mitigation measures. Replies

to comments from agencies, businesses, individuals, and organizations are provided in Section 5.0. Comments received are organized and numbered in their chronological order of submittal and are listed in Table 5.0-1. Table 5.0-2 is a list of private citizen comments and a copy of the standard form letter. A general response was prepared and is referenced for each of those submitted. In many cases other letters were so similar in content that the reader is referred to the form letter response. These individual letters and responses follow Table 5.0-2.

2.3.3 List of Commenters and Index to Responses

A list of issues raised in the comment letters and public hearings is compiled in Table 2.0-1, Index to Information Regarding Issues Raised in the Draft EIR/EIS. Since most of the comments raised are issues that had already been addressed in the Draft EIR/EIS, the table indicates where in that draft commenters may find the evaluation.

Table 2.0-2, List of Commenters and Index to Responses, is a list of each commenting agency, organization, business, and individual. The list indicates the commenter, a reference to Table 2.0-1 where the requested information can be found and the identification number designated to the letter. Since many of the comments were general in nature, they were expanded on and referenced in Section 4.0, Collective Responses. Where specific comments were submitted and required a detailed response, the commenter is referred to the Sections of this Final EIR/EIS containing the response. Where commenters raised issues that have been previously addressed in the Draft EIR/EIS, they are referred to Table 2.0-1 for the location of that information.

**Table 2.0-1
Index to Information Regarding Issues Raised¹**

Issue/Topic	Draft EIR/EIS
1. ADMINISTRATIVE	
a. EIR Adequacy/ Requirements	1.1.1, 1.1.2
b. Other Documents/ Information	1.1.3.1, 2.4.4.3
c. Applicable Laws	1.1.1
d. Need for the Project	1.2.1, 1.2.2, 1.2.3
e. Socioeconomics	
2. ACOUSTICS/NOISE	
a. Noise Pollution at Quarry and Plant Sites	3.12.3.1, 3.12.3.2, 3.12.3.3, 3.12.3.4
b. Noise Pollution at Plant Site	3.12.3.1
c. Noise Pollution Along Railroad Right-of-Way	3.12.3.2, 3.12.3.3, 3.12.3.4
3. AIR QUALITY	
a. Increased PM ₁₀ and/or Dust Emissions at Quarry	3.6.3.2, 3.6.3.3, 3.6.3.4, 3.6.3.5
b. Increased Exhaust Emissions at Quarry	3.6.3.2, 3.6.3.3, 3.6.3.4, 3.6.3.5
c. Increased PM ₁₀ and/or Dust Emissions at Well Site and Pipeline	3.6.3.2, 3.6.3.3, 3.6.3.4, 3.6.3.5
d. Increased Combustion Emissions at Plant	3.6.3.2, 3.6.3.3, 3.6.3.4, 3.6.3.5
e. Increased PM ₁₀ and/or Dust Emissions at Plant	3.6.3.2, 3.6.3.3, 3.6.3.4, 3.6.3.5
f. Increased PM ₁₀ and/or Dust Emissions at 10" Replacement Pipeline	3.6.3.2, 3.6.3.3, 3.6.3.4, 3.6.3.5
g. Increased Exhaust Emissions Along Railroad Right-of-Way	3.6.3.2, 3.6.3.3, 3.6.3.4, 3.6.3.5
4. APPROVAL AND DENIAL	
a. Approval and Denial	
5. CULTURAL RESOURCES	
a. Prehistoric Cultural Resources	3.8.3.3, 3.8.3.4, 3.8.3.5, 3.8.3.6
b. Ethnic Cultural Resources	3.8.3.3, 3.8.3.4, 3.8.3.5, 3.8.3.6
c. Historic Cultural Resources	3.8.3.3, 3.8.3.4, 3.8.3.5, 3.8.3.6
6. CUMULATIVE IMPACTS	
7. GEOLOGY	
a. Quarry Slope Stability	3.2.3.2, 3.2.3.3, 3.2.3.4, 3.2.3.5
b. Loss of Paleontological Resources	3.2.3.2, 3.2.3.3, 3.2.3.4, 3.2.3.5
8. HAZARDS AND HAZARDOUS MATERIALS	
a. Groundwater Contamination Hazards at Plant and Quarry	3.10.3.2, 3.10.3.3, 3.10.3.4, 3.10.3.5
b. Explosive Hazards at Quarry	3.10.3.2, 3.10.3.3, 3.10.3.4, 3.10.3.5
c. Asbestos Exposure from 8" Pipeline	3.10.3.2, 3.10.3.3, 3.10.3.4, 3.10.3.5
9. HYDROLOGY AND WATER QUALITY	
a. Water Depletion at Plant Affecting Individual Well Owners	3.3.3.7, 3.3.3.8, 3.3.3.9, 3.3.3.10
b. Water Depletion at Plant Affecting the Groundwater Basin	3.3.3.7, 3.3.3.8, 3.3.3.9, 3.3.3.10

¹ Table 2.0-1 identifies each topic raised in comments submitted on the Draft EIR/EIS. For each topic, the chapter/section of the Draft EIR/EIS containing the appropriate information is indicated.

Issue/Topic	Draft EIR/EIS
c. Water Quality Degradation at Plant Affecting Individual Well Owners	3.3.3.7, 3.3.3.8, 3.3.3.9, 3.3.3.10
d. Water Quality Degradation at Plant Affecting the Groundwater Basin	3.3.3.7, 3.3.3.8, 3.3.3.9, 3.3.3.10
e. Water Depletion at Quarry	3.3.5.2, 3.3.5.3, 3.3.3.4, 3.3.3.5
f. Water Quality Degradation at Quarry	3.3.5.2, 3.3.5.3, 3.3.3.4, 3.3.3.5
g. Surface Water Flow at Quarry	3.3.5.2, 3.3.5.3, 3.3.3.4, 3.3.3.5
h. Cumulative Reduced Water Levels	3.3.6
i. Cumulative Water Quality Degradation	3.3.6
10. LAND USE AND PLANNING	
a. Compatibility with Existing Land Uses	3.9.3.2, 3.9.3.4, 3.9.3.5
b. Compatibility with Adopted Land Use Plans	3.9.3.2, 3.9.3.4, 3.9.3.5
11. OPERATIONAL CONSIDERATIONS	
12. PUBLIC HEALTH AND SAFETY	
a. Industrial Facility Safety	3.13.3.2, 3.13.3.3, 3.13.3.4, 3.13.3.5
b. Reclaimed Quarry Site Safety	3.13.3.2, 3.13.3.3, 3.13.3.4, 3.13.3.5
c. Health and Safety Impacts to the Public and Plant Employees	3.13.3.2, 3.13.3.3, 3.13.3.4, 3.13.3.5
13. RECLAMATION	
14. TRAFFIC AND CIRCULATION	
a. Truck Traffic Increases	3.11.3.2, 3.11.3.3, 3.11.3.4, 3.11.3.5
15. VEGETATION	
a. Loss of Vegetation at Quarry	3.4.3.2, 3.4.3.3, 3.4.3.4, 3.4.3.5
b. Loss of Vegetation at Well Site and Pipeline	3.4.3.2, 3.4.3.3, 3.4.3.4, 3.4.3.5
c. Loss of Vegetation at Plant	3.4.3.2, 3.4.3.3, 3.4.3.4, 3.4.3.5
d. Loss of Vegetation at 10" Replacement Pipeline	3.4.3.2, 3.4.3.3, 3.4.3.4, 3.4.3.5
16. VISUAL RESOURCES	
a. Aesthetic Degradation from Quarry Lighting and Glare	3.7.3.3, 3.7.3.4, 3.7.3.5, 3.7.3.6
b. Temporary and Permanent Aesthetic Degradation	3.7.3.3, 3.7.3.4, 3.7.3.5, 3.7.3.6
c. Aesthetic Degradation at Wallboard Storage Pile	3.7.3.3, 3.7.3.4, 3.7.3.5, 3.7.3.6
17. WILDLIFE	
a. Loss of Wildlife at Quarry	3.5.3.2, 3.5.3.3, 3.5.3.4, 3.5.3.5
b. Loss of Wildlife at Well Site and Pipeline	3.5.3.2, 3.5.3.3, 3.5.3.4, 3.5.3.5
c. Loss of Wildlife at Plant	3.5.3.2, 3.5.3.3, 3.5.3.4, 3.5.3.5
d. Loss of Wildlife at 10" Replacement Pipeline	3.5.3.2, 3.5.3.3, 3.5.3.4, 3.5.3.5
e. Loss of Wildlife Along Railroad Right-of-Way	3.5.3.2, 3.5.3.3, 3.5.3.4, 3.5.3.5

**Table 2.0-2
List of Commenters and Index to Responses**

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
A. AGENCIES		
1. Imperial County Air Pollution Control District (June 7, 2006)	--	14
2. California Regional Water Quality Control Board (July 14, 2006) (part of D. Tisdale, Exhibit 4)	9a, 9b, 9c, 9d	28
3. Imperial Irrigation District (May 12, 2006)	9a, 9b, 9e	2
4. State of California, Department of Conservation (July 14, 2006)	7a, 15	24
5. State of California, Department of Parks and Recreation (June 8, 2006)	5c, 7, 7b, 15, 15a, 16b, 17	16
6. State of California, Department of Toxic Substances Control (May 1, 2006)	8, 8c	1
7. State of California, Governor's Office of Planning and Research, State Clearinghouse and Planning Unit (May 24, 2006)	--	5
8. State of California, Public Utilities Commission, (May 22, 2006)	12, 14	4
9. United States Department of the Interior (June 8, 2006)	1, 9, 9a, 9c, 18g	15
10. United States Department of the Interior (July 31, 2006)	7, 9, 9a, 9b, 9c, 9d, 18g	31
11. United States Environmental Protection Agency (July 14, 2006)	3a, 3c, 3e, 3f, 9b, 9c, 9e, 9f, 9g, 9h	25
B. ORGANIZATIONS		
1. California Wilderness Coalition (July 9, 2002)	2, 3, 7, 9, 9d, 9f, 13, 15, 17, 18g, 18h	20
2. California Wilderness Coalition (July 17, 2006)		30
3. Center for Biological Diversity (July 9, 2002)	2, 3, 7, 9, 9d, 9f, 13, 15, 17, 18g, 18h	20
4. Center for Biological Diversity (May 16, 2006)	9, 17	3
5. Center for Biological Diversity (July 17, 2006)		30
6. Defenders of Wildlife (July 10, 2002)	3, 9, 17, 18g	21

2.0 Public Review and Consultation Process

Commenter		Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
7.	Desert Protective Council (July 8, 2002)	2, 3, 5, 13, 14, 15, 16a, 17, 18h,	19
8.	Desert Protective Council (July 9, 2002)	2, 3, 7, 9, 9d, 9f, 13, 15, 17, 18g, 18h	20
9.	Desert Protective Council (May 24, 2006)	--	6 and 7
10.	Desert Protective Council (July 17, 2006)	--	30
11.	Sierra Club, San Diego Chapter (July 9, 2002)	2, 3, 7, 9, 9d, 9f, 13, 15, 17, 18g, 18h	20
12.	Sierra Club, San Diego Chapter (July 17, 2006)	9, 9a, 9b, 9c, 9d, 9e, 9f, 9h, 9i, 18g	29
13.	Sierra Club, San Diego Chapter (July 17, 2006 [2])	1, 1a, 1c, 1e, 2, 3, 9, 15, 17, 18b, 18g	30
14.	Southern California Association of Governments (June 8, 2006)	1b	17
C. BUSINESSES			
1.	Bookman-Edmonston (GEI Consultants) (July 11, 2006)	9c, 9i	26
2.	Coyote Valley Mutual Water Company (June 12, 2006)	9b, 9h, 9i	18
3.	United States Gypsum Company (July 14, 2006)	9, 9b, 9d	26
4.	Wiedlin & Associates (July 15, 2006)	9, 18g	27
D. INDIVIDUALS			
1.	Abela, Alice	Form Letter	
2.	Acerro, Theresa	See Response	32
3.	Agee, Jesse	Form Letter	
4.	Allaback, Mark	Form Letter	
5.	Allen, Laura	Form Letter	
6.	Althiser, Kenneth	Form Letter	
7.	Andrews, Alison	Form Letter	
8.	Anshin, Judith	Form Letter	
9.	Armstrong, Marilee	Form Letter	
10.	Bach, Margaret	Form Letter	
11.	Baker, Bryan	See Form Letter Response	
12.	Barber, Janet	Form Letter	
13.	Barber, Jennifer	Form Letter	
14.	Barnes, John	Form Letter	
15.	Barrows, Michael	Form Letter	
16.	Bartl, Alan	Form Letter	
17.	Baumann, Alan & Janet	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
18. Baur, Saskia	Form Letter	
19. Beck, Connie	Form Letter	
20. Beck, Diane	Form Letter	
21. Becker, Sue	Form Letter	
22. Beer, Julie	Form Letter	
23. Behrakis, Deborah	Form Letter	
24. Belt, Annie	Form Letter	
25. Bennett, Edward L. & Mildred J.	Form Letter	
26. Bernardi, Nancy	Form Letter	
27. Berne, David	Form Letter	
28. Berry, Vanessa	Form Letter	
29. Bertles, Martha	Form Letter	
30. Beuchat, Carol	Form Letter	
31. Blumeneau, Audrey	Form Letter	
32. Bogert, Reid	Form Letter	
33. Bolman, Diane	Form Letter	
34. Bolt, Mitchell	Form Letter	
35. Bond, Monica	Form Letter	
36. Bordenave, Michael	Form Letter	
37. Boren, Gary	Form Letter	
38. Bottorff, Ron	Form Letter	
39. Branch, Steve	Form Letter	
40. Breiding, Joan	Form Letter	
41. Brettillo, Joseph	Form Letter	
42. Brink, Kim F.	Form Letter	
43. Brinkerhoff, Aaron	Form Letter	
44. Britton, Kathryn	Form Letter	
45. Brooker, Catherine	Form Letter	
46. Brown, Daniel	Form Letter	
47. Brown, Jim	Form Letter	
48. Brown, Joel	Form Letter	
49. Brown, Michael	Form Letter	
50. Brown, Steve	Form Letter	
51. Brumbaugh, Diana	Form Letter	
52. Brussmann, Peter	Form Letter	
53. Burford, Martha	Form Letter	
54. Burk, Joyce	Form Letter	
55. Burns, Robert	See Response	33
56. Burns, Vicki	Form Letter	
57. Camarena, Megan	Form Letter	
58. Campbell, Alicia	Form Letter	
59. Campbell, Tomas	Form Letter	
60. Campbell, Velene	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
61. Cant, John	Form Letter	
62. Carnahan, Walt	Form Letter	
63. Carroll, Jacqueline	Form Letter	
64. Carroll, Kathryn	Form Letter	
65. Carter, Marian	Form Letter	
66. Cass, Lorraine	Form Letter	
67. Cassidy, Margaret	Form Letter	
68. Caudill, Rich & Maya	Form Letter	
69. Chacalos, Payton	Form Letter	
70. Chapman, Zoe	Form Letter	
71. Chermak, Douglas	Form Letter	
72. Chichlar, Gerald	Form Letter	
73. Chien, Benny	Form Letter	
74. Christiana, Verna	Form Letter	
75. Christianson, Steve	Form Letter	
76. Clark, Jason	Form Letter	
77. Clark, Sally	Form Letter	
78. Close, Dan	See Response	34
79. Cluster, Mike	Form Letter	
80. Cohen, Howard	Form Letter	
81. Comisar, Gerald	Form Letter	
82. Confectioner, Vira	Form Letter	
83. Conly, Leonard	Form Letter	
84. Conroy, Thomas	Form Letter	
85. Cooper, Richard	Form Letter	
86. Costa, Francisco	Form Letter	
87. Cottingham, Brian	Form Letter	
88. Counseller, Erik	Form Letter	
89. Cousins, Catharine	Form Letter	
90. Crawford, David	Form Letter	
91. Cunningham, Debra	Form Letter	
92. Dane, William	Form Letter	
93. Dapore, Wendy	Form Letter	
94. Davidson, Davy	Form Letter	
95. Dayton, RuthAnne	Form Letter	
96. De Costanzo, Danielle	Form Letter	
97. Denneen, Bill	Form Letter	
98. Denison, James	See Form Letter Response	
99. Denison, Joyce (June 6, 2002)	9b, 9d, 9h, 9i, 17	12
100. Denison, Michael (June 1, 2002)	9b, 9d, 9h, 9i, 17	13
101. Denison, Richard (June 6, 2002)	9, 9h, 9i, 15, 17	11
102. Dennis, Larry	Form Letter	
103. Desilets, Michelle	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
104. Dexter, Ken	Form Letter	
105. Diaz, Israel	Form Letter	
106. Diaz, L.	Form Letter	
107. Diaz, Marisa	Form Letter	
108. Dickinson, Rebecca	Form Letter	
109. Doe, Crosby	Form Letter	
110. Doman, Geoffrey	Form Letter	
111. Domingos, Ananda	Form Letter	
112. Doncaster, Jeane J.	Form Letter	
113. Downing, Steve	Form Letter	
114. Duncan, Mike	Form Letter	
115. Duquette, Thomas	Form Letter	
116. Easter, Margaret	Form Letter	
117. Ecoman, Brett	Form Letter	
118. Edwards, Dylan	Form Letter	
119. Eger, Grace	Form Letter	
120. Emerson, Linda	Form Letter	
121. Engle, Ned	No Response Required	
122. English, Roger	Form Letter	
123. Ennis, Karen	Form Letter	
124. Epperson, Diane (May 30, 2006)	9b, 9d	9
125. Erwin, Cherie	Form Letter	
126. Evans, Linda	Form Letter	
127. Evans, James	Form Letter	
128. Fahlgren, Vivian	Form Letter	
129. Falberg, Gregory	Form Letter	
130. Feldman, Mark	Form Letter	
131. Field, Michael	Form Letter	
132. Fiklin, James	Form Letter	
133. Filipelli, DeBorah	Form Letter	
134. Fiore, Mark J.	Form Letter	
135. Fischer, Douglas	Form Letter	
136. Fisk, Linda	Form Letter	
137. Flietner, David	See Response	35
138. Fleming, Alan	Form Letter	
139. Floyd, Kim	Form Letter	
140. Foley, Fran	Form Letter	
141. Ford, Julie C.	Form Letter	
142. Fordice, John	Form Letter	
143. Fortner, Suzanne	Form Letter	
144. Foss, Janice	Form Letter	
145. Foster, Linda	Form Letter	
146. Fowlks, Dan	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
147. Frappier, Alexandra	Form Letter	
148. Frasier, Forest	Form Letter	
149. Freedlund, Ali	Form Letter	
150. Frewin, Terry	Form Letter	
151. Frugoli, Greg	Form Letter	
152. Fullam, Peter	See Form Letter Response	
153. Gagomiros, Keith	Form Letter	
154. Galvin, Peter	Form Letter	
155. Gan, Monica	Form Letter	
156. Garber, Dennis	Form Letter	
157. Garcia, Christine	Form Letter	
158. Gardner, Kyle	Form Letter	
159. Garrels, Sharon	Form Letter	
160. Garrett, Katherine	Form Letter	
161. Garrett, Kelley	Form Letter	
162. Garvin, Michael	Form Letter	
163. Gaul, Ron	See Form Letter Response	
164. Gerratana, Carol	See Form Letter Response	
165. Gibson, James	Form Letter	
166. Gierson, Ellen	Form Letter	
167. Goggins, Alan	Form Letter	
168. Gooch, Nancy	Form Letter	
169. Gottesman, Judith	Form Letter	
170. Gottscho, Andrew	Form Letter	
171. Graham, Kimberley	Form Letter	
172. Grant, Linda	Form Letter	
173. Greenberg, Corinne	Form Letter	
174. Greenblatt, Karl	Form Letter	
175. Gregor, Dorothy	See Form Letter Response	
176. Grenland, Dianne	Form Letter	
177. Griffith, Jeremiah	Form Letter	
178. Grobe, Nicola	Form Letter	
179. Guerreiro, Mike	Form Letter	
180. Hagen, Andrew	Form Letter	
181. Hagler, Douglas	Form Letter	
182. Hall, Robert	Form Letter	
183. Hamilton, Van & Lois	Form Letter	
184. Hampton, Susan	Form Letter	
185. Harkins, Joanne	Form Letter	
186. Harkins, Lynne	See Form Letter Response	
187. Harmon, Ben	Form Letter	
188. Harrington, Sue	Form Letter	
189. Harris, Victoria	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
190. Hartwick, Nancy	Form Letter	
191. Haskins, Bill	Form Letter	
192. Hawthorne, Anne	Form Letter	
193. Hayes, Sara	Form Letter	
194. Healy, Patricia	Form Letter	
195. Hein, Claudia	Form Letter	
196. Heinzig, Dennis	Form Letter	
197. Henry, Lyle	Form Letter	
198. Hensley, Gordon	Form Letter	
199. Hidy, Ross	Form Letter	
200. Hill, Kirsten	Form Letter	
201. Hillery, Karie	Form Letter	
202. Hodges, Herman	Form Letter	
203. Hoffman, Jeff	Form Letter	
204. Hofman, Diana	Form Letter	
205. Holcomb, Susan	Form Letter	
206. Holmes Fatooh, Audrey	See Form Letter Response	
207. Holz, Dennis	Form Letter	
208. Hoon, Daryl	Form Letter	
209. Hopkins, Thomas	Form Letter	
210. Huard, Nicholas	Form Letter	
211. Hubbs, Earl	Form Letter	
212. Huebner, Julie	Form Letter	
213. Hughes, Brendan	Form Letter	
214. Hughes, Nan	Form Letter	
215. Jacobs, David	Form Letter	
216. Jaeger, Diana	Form Letter	
217. Janson-Smith, Toby	Form Letter	
218. Jensen, Nancy	Form Letter	
219. Jessler, Darynne	Form Letter	
220. Johnson, Christina	Form Letter	
221. Johnston, Timothy	Form Letter	
222. Jones, Dayvid	Form Letter	
223. Jones, Kathleen	Form Letter	
224. Junak, Steve	Form Letter	
225. Kahn, Patricia	Form Letter	
226. Kandel, Cheryl	Form Letter	
227. Karlsson, Kent	Form Letter	
228. Karp, Michael	Form Letter	
229. Kaufman, I. Charles	Form Letter	
230. Kaufman, Kimberly	Form Letter	
231. Kaufman, Murray	Form Letter	
232. Kay, Joni	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
233. Kelly, Carol	Form Letter	
234. Kennedy, Arthur	See Form Letter Response	
235. Kiger, Mary Ann	Form Letter	
236. Kimball, Charlotte	Form Letter	
237. Kirk, Keith	Form Letter	
238. Klein, Karin	Form Letter	
239. Klein, Leslie	Form Letter	
240. Klopp, Basey	Form Letter	
241. Klosterman, Peter	Form Letter	
242. Kotte, Merry Brook	Form Letter	
243. Kraemer, Melissa	Form Letter	
244. Krakow, Jessica	Form Letter	
245. Kritzer, Sherry	Form Letter	
246. Kuelper, Carol	Form Letter	
247. Kulenovic, Minka	Form Letter	
248. Kummel, Julie	Form Letter	
249. Kutcher, Celia	See Form Letter Response	
250. Kwan, Mei	Form Letter	
251. Kwinter, Dave	Form Letter	
252. La Brie, Jon	Form Letter	
253. LaBrie, T.M.	Form Letter	
254. Laffey, John Kevin	Form Letter	
255. LaManna, Joseph	Form Letter	
256. Lange, Trent	See Form Letter Response	
257. Lariz, Mondy	Form Letter	
258. Laursen, Patti	Form Letter	
259. Lee, David	Form Letter	
260. Levine, Ross	Form Letter	
261. Lewis, Tryphena	Form Letter	
262. Lieber, Kurt	Form Letter	
263. Lilly, David	Form Letter	
264. Lin, Stephanie	Form Letter	
265. Linarez, Karen	Form Letter	
266. Linder, Lorin	Form Letter	
267. Linsley, Stephen	Form Letter	
268. Little, Eko	Form Letter	
269. Little, James	Form Letter	
270. Litvak, Jay	Form Letter	
271. Litwin, Julie	Form Letter	
272. Logsdon, Jimi	Form Letter	
273. Lotz, Elizabeth	Form Letter	
274. Lowell, Jacquie	Form Letter	
275. Lynch, Dennis	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
276. Lynn, Georgia	Form Letter	
277. Lyons, James	Form Letter	
278. Mack, Callie (July 14, 2006)	3, 9, 9b, 9d, 15, 16, 17	23
279. Mark, Marie	Form Letter	
280. Marshall, Ilona	Form Letter	
281. Marszal, Jeffrey G.	Form Letter	
282. Masarik, Charlotte	Form Letter	
283. Mason, Ken	Form Letter	
284. Matthews, Mark	Form Letter	
285. Maxwell, Jane	See Form Letter Response	
286. Mayer, Norman	Form Letter	
287. McAfee, Stephanie	Form Letter	
288. McClure, Roger & Judith	Form Letter	
289. McGowan, Cathy	Form Letter	
290. McKnight, Shoshanah	Form Letter	
291. McLaughlin, Janet H.	Form Letter	
292. Meier, Robert	Form Letter	
293. Meissner, Gregory	Form Letter	
294. Meril, Rick & Joan	Form Letter	
295. Merilatt, George	Form Letter	
296. Meyers, M.S.	Form Letter	
297. Miller, Jamie	Form Letter	
298. Miller, Laura	Form Letter	
299. Miller, Lee	Form Letter	
300. Miranda, Lara C.	See Response	36
301. Miranda, Luciana	Form Letter	
302. Mitchel, William	Form Letter	
303. Mitchell, Joyce	Form Letter	
304. Montoliu, Raphael	Form Letter	
305. Morris, Peter	Form Letter	
306. Morris, Todd	Form Letter	
307. Morris, Virginia	Form Letter	
308. Morrow, Mr. & Mrs. Jack L.	Form Letter	
309. Moser, Rich	Form Letter	
310. Mount-Sartor, Joanne	Form Letter	
311. Mundy, Kenneth	Form Letter	
312. Munoz, Jeanne	Form Letter	
313. Munson, Jacob	Form Letter	
314. Murphy, J.	See Form Letter Response	
315. Murphy, Virginia G.	Form Letter	
316. Napier, Sabrina	Form Letter	
317. Neuhauser, Alice	Form Letter	
318. Nguyen, Thanh-Lam	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
319. Nicodemus, Sharon	Form Letter	
320. Nogare, John	Form Letter	
321. Nogare, Susan	Form Letter	
322. Novotny, Michael & Sally	Form Letter	
323. O'Donnell, Kelly	Form Letter	
324. Ogella, Edith	Form Letter	
325. Olander, Chris	Form Letter	
326. O'Leary, Cathy	Form Letter	
327. Olin, Christopher	Form Letter	
328. Olin, Milton	Form Letter	
329. Olson, Tarin	Form Letter	
330. Omura, Kathy	Form Letter	
331. Orenstein, Susan E.	Form Letter	
332. O'Shea, Denis (July 11, 2006)	9, 9b	22
333. Painter, Elizabeth	See Form Letter Response	
334. Pan, Pinky Jain	Form Letter	
335. Parker, Angus M.	Form Letter	
336. Parker, Reece	Form Letter	
337. Parker, Ronald C.	Form Letter	
338. Parrish, Larry	Form Letter	
339. Patitz, Tatjana	Form Letter	
340. Patton, Carol	Form Letter	
341. Peer, William	Form Letter	
342. Pellicani, Andrea	Form Letter	
343. Penner, Marsha	See Form Letter Response	
344. Petersen, John	Form Letter	
345. Peterson, Janice	Form Letter	
346. Peterson, Morgan	Form Letter	
347. Pewthers, Cale	Form Letter	
348. Pickering, Steve	Form Letter	
349. Pillsbury, Cheri	See Form Letter Response	
350. Polesky, Alice	Form Letter	
351. Pomies, Jackie	Form Letter	
352. Preston, Mar	Form Letter	
353. Price, Lynn	Form Letter	
354. Prola, Jim & Diana	Form Letter	
355. Proteau, Mary	Form Letter	
356. Pruitt, Richard	Form Letter	
357. Puga, Shirley	Form Letter	
358. Qualls, Mike	Form Letter	
359. Quong, Angela	Form Letter	
360. Rabens, Robin	Form Letter	
361. Ratcliffe, John W. & Joanne E.	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
362. Raya, Art & Sharon	Form Letter	
363. Raymond, MariaElena	See Form Letter Response	
364. Reed, Cynthia	Form Letter	
365. Reed, Kristin	Form Letter	
366. Reed, Robert R.	Form Letter	
367. Reinberg, Don	Form Letter	
368. Remington, Stephanie	Form Letter	
369. Reyes, Fran	Form Letter	
370. Riddell, John	Form Letter	
371. Riley, Bill	Form Letter	
372. Ritter, Amy	Form Letter	
373. Robinson, Debra K.	Form Letter	
374. Robinson, Richard	Form Letter	
375. Robison, Anne	Form Letter	
376. Rocco, David	Form Letter	
377. Rochford, Dan	Form Letter	
378. Rojas, Teresa	Form Letter	
379. Root, Charlene	Form Letter	
380. Roper, Erik	Form Letter	
381. Rose, Barbara R.	Form Letter	
382. Rosen, Z'ava	Form Letter	
383. Rousselot, Patrik	Form Letter	
384. Ruane, Catherine	Form Letter	
385. Rubin, Gene & Lorraine	Form Letter	
386. Rubin, Michael	Form Letter	
387. Russell, James	Form Letter	
388. Russell, Phyllis	Form Letter	
389. Sacco, Thomas	Form Letter	
390. Sahagun-Norte, Yolanda M.	Form Letter	
391. Salzman, Richard	Form Letter	
392. Saufley, Harold	Form Letter	
393. Saverio, R.	Form Letter	
394. Schlecker, Rose	Form Letter	
395. Schlegel, Ed	Form Letter	
396. Schleimer, Sylvia	Form Letter	
397. Schmitt, Richard	Form Letter	
398. Schneider, Anna	Form Letter	
399. Scholl, Florence	Form Letter	
400. Schuett, Greg	Form Letter	
401. Schulte, Dawne	Form Letter	
402. Schwick, Keplin	Form Letter	
403. Scott, Joan	Form Letter	
404. Scully, Patricia	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
405. Senour, Jon C.	Form Letter	
406. Shapira, Susan	Form Letter	
407. Shapiro, Susan	Form Letter	
408. Shemwell, Misty	Form Letter	
409. Sheppard, Jacob	Form Letter	
410. Shields, Kelli	Form Letter	
411. Siegel, Kassie	Form Letter	
412. Silan, Sheila	Form Letter	
413. Silver, Jack	Form Letter	
414. Simon, Philip	Form Letter	
415. Simons, Anita	Form Letter	
416. Smallwood, Spencer	Form Letter	
417. Smith, Adam	Form Letter	
418. Smith, Brian	Form Letter	
419. Smith, Dmitra	Form Letter	
420. Snyder, Renee	Form Letter	
421. Sondrini, Dennis O.	Form Letter	
422. Sonoda, Charlotte	Form Letter	
423. Sonoquie, Mo	Form Letter	
424. Sorenson, John F.	Form Letter	
425. Spenger, Constance	Form Letter	
426. Stadler, Scott	Form Letter	
427. Starks, Les	Form Letter	
428. Stearns, Geoffrey	Form Letter	
429. Steele, Mary	Form Letter	
430. Steinbach, Ann	See Form Letter Response	
431. Steiner, John	Form Letter	
432. Stephens, Josh	Form Letter	
433. Sternberg, Justin	Form Letter	
434. Stevens, Thomas N.	Form Letter	
435. Stewart, Dana L.	Form Letter	
436. Stewart, Glenn R.	See Form Letter Response	
437. Stillman, Jon	Form Letter	
438. Stoilov, Luben	Form Letter	
439. Stovin, Ed	See Response	37
440. Stowe, David	Form Letter	
441. Strauss, Howard	Form Letter	
442. Strickler, Jean	Form Letter	
443. Stringer, Lewis	Form Letter	
444. Strobel, Jeanine	Form Letter	
445. Stromberg, Mark	Form Letter	
446. Stuckey, Marci	Form Letter	
447. Suzuki, Mika	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
448. Sweel, Greg	Form Letter	
449. Swift, Kevin	See Response	38
450. Taber, Lucile J.	Form Letter	
451. Taiz, Lee	Form Letter	
452. Talamo, Dave	Form Letter	
453. Tankenson, Ethel	Form Letter	
454. Thomas, Dennis	Form Letter	
455. Thomas, Joseph	Form Letter	
456. Thomas, Kevin	Form Letter	
457. Thomas, Marilyn	Form Letter	
458. Thomas, William	Form Letter	
459. Thorburn, Linda	Form Letter	
460. Tiarks, Daniel	Form Letter	
461. Tisdale, Donna (May 24, 2006)		8
462. Tisdale, Donna (July 16, 2006)	1, 3, 9, 9b, 9d, 12c, 14a, 16b, 17, 18e, 18g	28
463. Tomczyszyn, Michael	Form Letter	
464. Tomlinson, Mike	Form Letter	
465. Torgan, Burt F.	Form Letter	
466. Torres, Luz	Form Letter	
467. Trapp, Gene R.	Form Letter	
468. Travis, Annabelle	Form Letter	
469. Triplett, Tia	Form Letter	
470. Turek, Gabriella	Form Letter	
471. Turner, Shirley	Form Letter	
472. Tyler, Steve & Jill	Form Letter	
473. Vaden, Marcia	Form Letter	
474. Van Bloemen, Dona	Form Letter	
475. Vandersloot, Jan D.	Form Letter	
476. Vandrags, Brady	Form Letter	
477. VanVoorhis, David	Form Letter	
478. Varga, John L.	Form Letter	
479. Varvas, Jason	Form Letter	
480. Velyvis, Stephen	Form Letter	
481. Voss, Randall	Form Letter	
482. Warenycia, Dee	Form Letter	
483. Warenycia, Paul	Form Letter	
484. Watt, Mark	Form Letter	
485. Watts-Rosenfeld, Susan	Form Letter	
486. Weatherman, John	Form Letter	
487. Weaver, Judy	Form Letter	
488. Weaver, Kenneth	Form Letter	
489. Weeden, Noreen	See Form Letter Response	
490. Weikel, Wendy	Form Letter	

2.0 Public Review and Consultation Process

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
491. Weinberg, Amanda	Form Letter	
492. Weisz, Russell	Form Letter	
493. Welsch, Bill	See Response	39
494. Welsh, Deborah	Form Letter	
495. Werner, Scott	Form Letter	
496. Werninghaus, Karla	Form Letter	
497. Weyer, Linda	Form Letter	
498. White, Kat	Form Letter	
499. White, Michael	Form Letter	
500. Whitnah, Claudia M.	Form Letter	
501. Wikle, Victoria	Form Letter	
502. Wild, Kathryn	See Form Letter Response	
503. Wilder, Jenny	Form Letter	
504. Wiley, Carol	Form Letter	
505. Williams, Margie	Form Letter	
506. Williams, Mark	Form Letter	
507. Williams, Nicholas	Form Letter	
508. Wilson, Mary Ann	Form Letter	
509. Winslow, Lynda	Form Letter	
510. WinterSun, P-A	Form Letter	
511. Wisti, Mike	Form Letter	
512. Wolf, Rachel	Form Letter	
513. Wolfe, Gerry & Vicki	Form Letter	
514. Wood, Wendell	Form Letter	
515. Woodcock, Charlene	See Form Letter Response	
516. Woodcock, William E.	Form Letter	
517. Woods, James L.	Form Letter	
518. Worthy, Crista	Form Letter	
519. Wright, Pam	Form Letter	
520. Wright, Sharon	Form Letter	
521. Wuhrmann, Karin	Form Letter	
522. York, Mark	Form Letter	
523. Youhas, Sara	Form Letter	
524. Yuen, Lois	Form Letter	
525. Yurkovsky, Alexandra	Form Letter	
526. Zarkowski, De Ann	Form Letter	
527. Zivian, Anna	Form Letter	
528. Zukoski, Katie	Form Letter	

3.0 Draft EIR/EIS Errata

3.1 OVERVIEW

Evaluation of the comments reviewed relative to the Draft EIR/EIS impact analysis determined that, in general, the comments received did not require additional evaluation or changes to the conclusions reached, or alternatives to the proposed Project. Changes or clarifications to the Draft EIR/EIS were made in response to some of the comments to the Draft EIR/EIS.

These changes and clarifications are described in Section 3.2 of this Final EIR/EIS. None of the changes contain significant new information that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the Project or a feasible way to mitigate or avoid such an effect. Additionally, the Final EIR/EIS does not present a feasible Project alternative or mitigation measure considerably different from others previously analyzed in the Draft EIR/EIS. All of the information added to the Final EIR/EIS merely clarifies, amplifies, or makes insignificant modifications in the Draft EIR/EIS. Therefore, recirculation of the Draft EIR is not required (see Guidelines Section 15088.5). **Section 3.0 provides an explanation of the criteria for recirculation of an EIR/EIS and why recirculation is not required in this case.**

3.2 ERRATA

Table 3.0-1, Corrections to the Draft EIR/EIS, contains corrections and clarifications that are made to the text of the Draft EIR/EIS. See Appendix A for the errata pages.

**Table 3.0-1
Corrections to the Draft EIR/EIS**

Text Pages	Tables	Figures
Section Summary		
	S-3, page S-9	
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Page 1.0-17		
Section 2.0		
Page 2.0-17		2.0-19, page 2.0-17
Page 2.0-18		
Section 3.1		
Page 3.1-13		
Page 3.1-14		
Section 3.2		
Page 3.2-24		3.2-1, page 3.2-3
		3.2-4, page 3.2-11
Section 3.3		
3.3-1	3.3-3A, page 3.3-18	3.3-5, page 3.3-19
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3.3-71		3.3-17, page 3.3-81
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3.3-90		
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Section 3.4		
3.4-17		3.4-4, page 3.4-13
3.4-31		
3.4-32		
Section 3.5		
3.5-42		3.5-2, page 3.5-7
		3.5-4, page 3.5-35
Section 3.6		
3.6-45		
Section 3.8		
3.8-10, 3.8-12		
Other		
Species List		

4.0 Collective Responses

4.1 COMMENTS ALREADY ADDRESSED IN THE DRAFT EIR/EIS

Section 15132 of the CEQA Guidelines states that the Final EIR/EIS shall consist of:

- The Draft EIR/EIS or a revision of the Draft;
- Comments and recommendations received on the Draft EIR/EIS either verbatim or in summary;
- A list of persons, organizations, and public agencies commenting on the Draft EIR/EIS;
- The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and
- Any other information added by the Lead Agency.

In addition to the content requirements, the Lead Agency is required to “evaluate comments on environmental issues received from persons who reviewed the Draft EIR/EIS and shall prepare a written response” (CEQA Guidelines Section 15088(a)).

In responding to the issues raised, the Lead Agency’s comments may take the form of a revision to the Draft EIR/EIS or may be a separate section in the Final EIR/EIS (CEQA Guidelines Section 15088(c)). The Final EIR/EIS can also provide new information added to the EIR/EIS that merely clarifies or amplifies or makes insignificant modifications in an adequate EIR/EIS (CEQA Guidelines Section 15088.5(b)).

While the comments received did not result in substantive modifications or corrections to the analyses or conclusions of the environmental analyses, amplification and clarification of some conclusions and additional specificity for some mitigation measures was suggested. This Final EIR/EIS, including this chapter, provides additional amplification and clarification requested for aspects of the major issues addressed in the Draft EIR/EIS.

This section provides collective responses on the key issues of public interest (i.e., hydrology, biology, air quality, and aesthetics). As shown in Table 2.0-1, the majority (approximately two-thirds) of public comment centered on environmental issues of hydrology, biology, and air quality.

This section addresses the most commonly asked questions and questions/comments that were general in nature. While specific responses to comments of a general nature are not required, this section provides a good faith attempt to respond to the general issue raised. See *Browning-Ferris Industries of California, Inc. v. San Jose* (1986) 181 Cal. App. 3d 852, which states that the Lead Agency must respond to all significant environmental comments in a level of detail commensurate to that of the comment. Representative quotes from comment letters are provided and discussion and/or clarification of the environmental analyses and administrative process are given. Responses to comments include references to the appropriate general responses presented in Section 4.3.

4.2 NON-EIR/ADMINISTRATIVE ISSUES

4.2.1 Non-EIR Comments

Many commenters voiced displeasure with the proposed Project. Often these comments were combined with general statements about environmental concerns (e.g., air quality, traffic, noise), usually without reference to the studies completed in the Draft EIR/EIS.

The Guidelines for Implementation of CEQA, specify the nature in which comments should be addressed regarding a Draft EIR:

- In reviewing draft EIR's, persons and public agencies should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project. CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.

CEQA Guidelines Section 15204(a)

- Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence.

CEQA Guidelines Section 15204(c)

Nevertheless, the Guidelines state that these limitations should “...not be used to restrict the ability of reviewers to comment on the general adequacy of a document or of the lead agency to reject comments not focused as recommended...”

This Final EIR/EIS embraces a good-faith effort to address each comment pertaining to the analysis of impacts from the proposed Project. However, other comments reviewed were more closely related to the commenter’s opinion of how a vote on the approval or denial should be cast, how the Project could affect the commenter’s ‘quality of life’, concerns over property value decrease, and/or demands for compensation as a result of perceived lower quality of life or property value. This section provides direction for these types of comments, which are either general or non-specific to the Draft EIR contents and/or not considered consistent with the purpose and intent of EIR review.

4.2.2 Approval/Denial, Need, and Consideration of the Project

Consideration of the *need* for a project is not generally within the scope of an EIR, as the EIR’s role is to present an impartial evaluation of the physical environmental effects of a project, should it be implemented. CEQA’s requirement to consider *project objectives* is such that a reasonable range of alternatives can be determined and evaluated. In considering approval of a project, decision-makers do weigh factors such as need, economic benefits to the community (taxes, jobs, expenditures for local goods and services, and secondary economic benefits), appropriateness at this time, in addition to the other factors and environmental consequences examined in the EIR.

As a public agency with authority over land use within its jurisdiction, the County is responsible for managing certain land use activities, planning for future land uses, and exercising its discretionary authority over development proposals. The County has an obligation to review and consider any proposal for land development that is submitted in conformance with established procedures.

For the U.S. Gypsum Project, the Applicant submitted Use Permit and Reclamation Plan applications for review in conformance with County requirements. An initial step by the County Planning Department is completion of an environmental review. Another important consideration at this stage is the proposal’s consistency with plans, policies,

and regulations; a discussion of such consistency, as well as an evaluation of compatibility with existing land uses, is included in the Draft EIR. Comments submitted on the Draft EIR that offer opinions on support or denial of the application are hereby referred to the decision-makers for consideration in their deliberations.

4.2.3 Administrative Considerations

Many comments on the Draft EIR/EIS review period were received, such as:

“It is my desire to see an extension of this response period so that I and my neighbors can study more fully other areas of this DEIR that we have not been able to respond to.”

CEQA purposefully establishes time limits. The statute specifically requires that state agencies “...shall establish, by resolution or order, time limits that do not exceed ... one year for completing and certifying environmental impact reports.”

The public review period for DEIRs must be for no less than 30 days following the date of notice, or 45 days where the DEIRs are submitted to the State Clearinghouse. (Pub. Resources Code, Section 21091(b); CEQA Guidelines, Sections 15105(a), 15205(d)). Nor should the review period be for longer than 60 days, except in unusual situations (CEQA Guidelines, Section 15105(a)). EISs have a mandatory review period of 60 days. Both the County and the BLM extended the comment period to July 17, 2006.

4.3 GENERAL RESPONSES

4.3.1 Peninsular Bighorn Sheep

Several letters commented on potential Project impacts to Peninsular bighorn sheep. The Draft EIR/EIS identifies and analyzes potential impacts to Peninsular bighorn sheep in Section 3.5 and Appendix C (Biological Resources). The following discussion supplements the Draft EIR/EIS in response to comments received, a recent legal decision affecting designated critical habitat, and new information from California Department of Parks and Recreation on Peninsular bighorn sheep habitat use near the proposed Quarry expansion site. Except where noted otherwise, the following text is based on the references cited in Appendix C of the Draft EIR/EIS, primarily the USFWS Recovery Plan (2000 and 2001a) and Federal Register notices to list Peninsular bighorn sheep as endangered (1998) and designate critical habitat (2001b).

Natural History

Peninsular bighorn sheep are the southern populations of the more widespread Nelson's bighorn sheep (*Ovis canadensis nelsonii*), occurring in desert mountain ranges from southern Riverside County southward into Baja California. The Peninsular bighorn sheep is federally listed as an endangered "distinct vertebrate population" and listed as threatened and as a "fully protected animal" by the California Department of Fish and Game (CDFG).

Peninsular bighorn sheep's elevational range is about 300 to 4,000 feet elevation (much lower than Peninsular bighorn sheep populations farther north). Its habitat is usually open slopes in hot and dry desert regions where rough rocky terrain on steep slopes, ridges, canyons, and washes supports only sparse vegetation. Peninsular bighorn sheep typically do not outrun their predators, instead they use their climbing abilities to escape in steep, rugged terrain. Predator evasion depends on the ability to detect danger from a distance, and Peninsular bighorn sheep regularly use steep, open slopes and ridgelines, which offer unobstructed views of wide areas. Females (ewes) make even greater use of steep rugged terrain late in pregnancy, while giving birth, and during the first few days after lambs are born. Steep terrain is a crucial component of bighorn habitat, providing for escape from predators and thermal shelter from excessive heat and severe storms.

Peninsular bighorn sheep tend to move to lower elevations and to be more localized in distribution as summer progresses (roughly May through October), usually concentrating in the vicinity of permanent water sources. Krausman et al. (1999) cite several studies showing that a very large proportion of dry season sheep sightings are within about a mile of permanent water sources. When temperatures become moderate in the fall, the sheep disperse to higher elevations and ridges. During mild weather, Peninsular bighorn sheep evidently can survive several months without drinking water. Also, rainwater may collect in seasonal rock pools (tinajas) or other temporary sources allowing range expansion following the first seasonal rains. Ewes aggregate in "ewe groups" on specific home ranges with other, often related, ewes. They may range widely within home ranges, or shift home ranges to find forage, water, and escape terrain in suitable proximity.

Peninsular bighorn sheep occasionally migrate between mountain ranges by crossing desert lowlands, but there is no regular migration of sheep herds between local mountain ranges. Males (rams) move within mountain ranges and between ranges much more frequently than ewes. The occurrence of Peninsular bighorn sheep in a

series of isolated mountain ranges, with occasional migration between ranges, is considered a “metapopulation” in biology literature.

Peninsular bighorn sheep feed on many forage species including grasses, forbes, and shrubs. The distribution of forage plants does not appear to limit sheep distribution, though it can influence seasonal habitat use patterns. Forage availability is generally greater and more diverse on alluvial fans and in washes than on steep slopes, and Peninsular bighorn sheep make use of these areas for feeding. However, they generally remain within about one-half mile of steep mountain slopes, which serve as “escape terrain” when the animals perceive danger.

Peninsular bighorn sheep tend to avoid humans and related disturbances, which may cause them to avoid traditional habitat areas or alter their movement patterns. Other detrimental effects of human activities include mortality on roads, ingestion of toxic ornamental plants, introduction of disease organisms from domestic livestock, harassment by domestic dogs, and perhaps increased coyote predation on young sheep (i.e., “subsidized predator” populations caused by increased food availability at trash bins). In the northern San Bernardino Mountains, local resident Peninsular bighorn sheep have become acclimated to limestone quarrying and make regular use of inactive quarries and even active quarries during inactive hours (personal observations and communications with quarry staff by Scott D. White).

The decline of Peninsular bighorn sheep is attributed to combined effects of disease and parasitism; low lamb recruitment; habitat loss due to development in the mountain foothills between Palm Springs and La Quinta; habitat degradation and fragmentation; non-adaptive behavioral responses to residential and commercial development; and high predation rates by mountain lions. Land use conversions and linear developments (especially highways) have partially or completely eliminated the possibility of migrations between some mountain ranges and prevent genetic exchange and demographic “rescue” among populations (e.g., Interstate 10 prevents Peninsular bighorn sheep from migrating between the San Bernardino Mountains and the San Jacinto Mountains, and is largely responsible for the recognition of Peninsular bighorn sheep as a “distinct population segment” by the USFWS and CDFG).

Peninsular bighorn sheep give birth (“lamb”) mainly in late winter through early spring (February - April). Lambing is the period from one month before a ewe gives birth until weaning (at about 4 to 6 months of age). Births can occur over much of the winter or spring, so lambing season can extend from January through August. During pregnancy and lactation, ewes require high-protein forage, as found on deeper more productive

soils of alluvial fans and canyon bottoms, but retreat to better escape terrain late in pregnancy and to give birth. Lambing areas are associated with ridge benches or canyon rims adjacent to steep slopes or escarpments.

In its critical habitat designation (2001), the USFWS described “primary constituent elements” essential to the conservation of Peninsular bighorn sheep as the following:

- Space for the normal behavior of groups and individuals
- Protection from disturbance
- Availability of the various native desert plant communities found on different topographic slopes, aspects, and landforms, such as steep slopes, rolling foothills, alluvial fans, and canyon bottoms
- A range of habitats that provide forage, especially during periods of drought
- Steep, remote habitat for lambing, rearing of young, and escape from disturbance and/or predation
- Water sources
- Suitable linkages allowing individual Peninsular bighorn sheep to move freely between ewe groups and maintain connections between subpopulations within the Peninsular Range metapopulation
- Other essential habitat components to accommodate population expansion to a recovery level

Critical habitat as originally mapped in 2001 is very similar to mapped “essential habitat” in the USFWS’s Recovery Plan for Peninsular Bighorn Sheep (2000 and 2001a). Appendix B of the Recovery Plan describes the process for selecting which lands to include as essential habitat. These were elevation, steepness of slopes, proximity to suitably steep slopes, and vegetation types. Perennial water availability was excluded from the criteria.

Surface water availability during summer is a necessary element of Peninsular bighorn sheep habitat. In the Recovery Plan for Peninsular Bighorn Sheep, the USFWS did not base “essential habitat” mapping on perennial water sources because (1) in the San Jacinto and much of the Santa Rosa Mountains, dependable surface water is available year-around and therefore not limiting to habitat suitability; (2) perennial water availability is a limiting factor only during prolonged droughts or summers without significant precipitation from thunderstorms; (3) water sources are poorly mapped in

some parts of the range, and (4) Peninsular bighorn sheep can range at least 10 miles from known perennial water sources.

Water use by Peninsular bighorn sheep was reviewed by Krausman and coauthors (1999). Peninsular bighorn sheep can survive without drinking water during mild seasons (by making efficient use of moisture in food), but in summer they must drink additional water. During summer, bighorn sheep may go without drinking for five to 15 days but lose about 20 percent of their body weight as a result, and they could not survive substantially longer periods without drinking. During summer, Peninsular bighorn sheep require a minimum daily intake of 4 to 5 percent of their body weight (and 1 to 2 percent in winter).

Legal Status of the Critical Habitat Designation

In 2001, the USFWS published a Final Rule designating critical habitat for the Peninsular bighorn sheep. The USG Quarry, parts of the existing narrow gauge rail line, and the proposed quarry expansion areas were included within designated critical habitat. In the USFWS's description, designated critical habitat included specific areas within and outside the geographic range occupied by a species at the time of its listing determined to be essential to the conservation of the species.

Designated critical habitat is protected from destruction or adverse modification by the requirement that federal agencies that fund, authorize, or carry out projects consult with the USFWS under Section 7 of the Endangered Species Act. Destruction or adverse modification of critical habitat is defined as direct or indirect alteration that appreciably diminishes the value of critical habitat for the survival and recovery of the listed species. The critical habitat designation does not afford additional protection to activities on non-federal lands that do not involve a federal nexus (i.e., a project requiring federal authorization).

On August 2, 2006 an amended order granting motion for approval of consent decree and dismissal with prejudice was entered in U.S. District Court Central District of California (*Agua Caliente Bands of Cahuilla Indians, et al. v. Norton et al.*, case No. EDCV 05-187-VAP [OPx] [See Appendix B of the Final EIR/EIS]). This decision resulted in a remand of Peninsular bighorn sheep critical habitat and partial vacatur. This decision remanded the USFWS's February 1, 2001 Final Rule designating critical habitat for the Peninsular bighorn sheep (66 Fed Reg. 8650), based on errors in the USFWS's assessment of economic impacts associated with the Final Rule. Specifically the Consent Decree and order require that the USFWS reconsider critical habitat for the species and prepare a new rule within 2 years.

In reconsidering the Final Rule, the USFWS shall address, among other things, the economic impacts of designating critical habitat pursuant to Section 4 of the Endangered Species Act, 16 U.S.C. Section 1533(b)(2). During the remand period when the USFWS is promulgating a new critical habitat rule, the old rule will largely remain in place and be effective except for specific lands omitted from the rule, including areas where mining operations have existed or are planned, as well as certain lands adjacent to these areas. Such lands were removed from the critical habitat designation. Thus at the date of the court's order, such lands are no longer within the designated critical habitat boundaries and are no longer subject to any legal requirements relating to designated critical habitat for Peninsular bighorn sheep.

The Fish Canyon Quarry and surroundings are specifically identified in Figure 1, Exhibit C of the Consent Decree (see attached Exhibit 4 and Figure 1). As of August 3, 2006 the Fish Canyon Quarry (Exhibit 4), referred to as the USG Plaster City Quarry in the Draft EIR/EIS, is no longer within critical habitat for the Peninsular bighorn sheep and is no longer subject to legal requirements relating to designated critical habitat for Peninsular bighorn sheep. Under the court ruling, a portion of the USG narrow-gauge rail line east of the Quarry remains within critical habitat, pending the USFWS's revision.

On Wednesday October 10, 2007 the Department of Interior, Fish and Wildlife Service published a new proposed Rule for designation of critical habitat for the Peninsular bighorn sheep (Federal Register/Vol. 72, No. 195/Wednesday, October 10, 2007/Proposed Rules) 50 CFR Part 17 (see Appendix D of the Final EIR/EIS). This proposed rule again revises the critical habitat boundary of the Peninsular bighorn sheep to include some of the land removed in the Consent Decree described above. Should the proposed rule be adopted, portions of the Quarry would again be subject to legal requirements relating to designated critical habitat for Peninsular bighorn sheep.

Occurrence in Fish Creek Mountains

The Fish Creek Mountains, including the USG Quarry Project area, are within "essential habitat" as mapped in the Peninsular Bighorn Sheep Recovery Plan but the USG Quarry Project area is no longer within legally-designated Critical Habitat. Peninsular bighorn sheep "ewe groups" occur in the Santa Rosa Mountains to the north; Vallecito Mountains to the west; and Jacumba Mountains to the south of the proposed USG Quarry expansion area. The Fish Creek Mountains are at the margin of more extensive occupied habitat in the Vallecito Mountains to the west. The proposed USG Quarry Project site is at the northeastern margin of the Fish Creek Mountains. Suitable and occupied Peninsular bighorn sheep habitat occurs to the west, south, and southeast of

the USG Quarry site, but not to the north. In general, the Fish Creek Mountains provide suboptimal habitat for Peninsular bighorn sheep because no permanent water sources are available. But Peninsular bighorn sheep do make regular use of such habitat especially during winter when they may go without surface water for several months. Using these areas during winter may serve to reduce foraging pressure in summer range nearer water sources and it may allow them to avoid predation when mountain lions are present in other areas.

Peninsular bighorn sheep are sometimes observed in the Fish Creek Mountains, especially during mild seasons but rarely in summer. The map of known ewe groups shows no ewe groups using the Fish Creek Mountains (Figure 3 in the Recovery Plan for Peninsular bighorn sheep, USFWS 2000). Anza-Borrego Desert State Park Geographic Information System (GIS) data show numerous Peninsular bighorn sheep occurrences (compiled from field observations and radio telemetry data) within a few miles of the USG Project area, around Split Mountain (west of USG) and the Fish Creek Mountains (south and southeast of the Project area). Park staff emphasized that the data set is incomplete for three reasons: (1) additional telemetry data have been collected but not yet incorporated into the data base shown on the map; (2) a given point may represent one animal or a group (e.g., a group of ewes, rams, or a ewe with its offspring); (3) telemetry points are collected on varying schedules and represent Peninsular bighorn sheep locations only at specific moments. Data points do not reflect Peninsular bighorn sheep movements from point to point, or various daily or seasonal movements in any given area.

The Fish Creek Mountains are at the west margin of the Salton Sink. Summer temperatures are very hot, generally above 100 degrees Fahrenheit (°F). Total annual precipitation is only a few centimeters. Some summer rainfall occurs in irregular thunderstorms, but there are no known springs and surface water is not available in summer. Thus, the Fish Creek Mountains do not serve as summer range for Peninsular bighorn sheep. Peninsular bighorn sheep do occur in the Fish Creek Mountains during mild seasons when they can survive without surface water or when pooled rainwater may be available from heavy rains (unpublished data, California Department of Parks and Recreation). Ewes with young lambs have been reported within about 1 mile of the Project area (California Department of Parks and Recreation comment 16-11), and would likely sometimes use habitat on the site.

Field surveys for the Quarry found Peninsular bighorn sheep sign on the ridge east of the existing Quarry, and California Department of Parks and Recreation unpublished data indicate Peninsular bighorn sheep occurrences in the Project area. Sign was

observed in the Shoveler claims area on the west part of the Project site, and another, which crossed the narrow-gauge rail line from west to east north of the USG processing area, and went into the Fish Creek Mountains above the existing Quarry. Since publication of the Draft EIR/EIS, a third Peninsular bighorn sheep occurrence has been documented on the USG Project site. In early August 2006, Quarry staff saw an animal in the Shoveler claims area at the west part of the Project site; over the next few days, it was seen twice more near the processing area (though the workers did not get good views). Finally, on August 7, 2006, the remains of a dead immature male Peninsular bighorn sheep were found at the Shoveler claims area. The USG Quarry Manager contacted Anza-Borrego Desert State Park. A Park officer investigated the site and disposed of the remains. There was no evidence of predation (e.g., by mountain lion) or major injury and the cause of death is unknown.

The Project site and adjacent mountain slopes function infrequently as Peninsular bighorn sheep movement habitat (i.e., Peninsular bighorn sheep traverse the Project area as they disperse between local habitat areas), or as lambing habitat and winter range in some years near the Project area (and perhaps within the area).

Project Effects

Quarry development would not directly affect regularly-occupied Peninsular bighorn sheep habitat. It would, however, directly or indirectly affect areas where occasional Peninsular bighorn sheep sightings or sign have been documented and lambing habitat and winter range used in some years to the west, south, and southeast of the Project area, and perhaps extending onto the Project area.

Gypsum outcrops on the USG claims have extremely low vegetation cover and diversity. What little vegetation is present is dominated by pygmy cedar (*Peucephyllum schottii*). Pygmy cedar is widespread and relatively common throughout the low desert. In a forage analysis by Krausman et al. (1989), pygmy cedar was not reported at all among species Peninsular bighorn sheep fed upon in western Arizona, though the study area is within pygmy cedar's geographic range (Turner et al. 1995). The gypsum outcrops also provide relatively poor escape terrain. Their topography and vegetation cover are similar to the "mud hills" of the Borrego Badlands and Carrizo Badlands, which were excluded from mapped essential habitat in the Recovery Plan for Peninsular Bighorn Sheep (USFWS 2001 Appendix A, p. 161). Based on poor habitat suitability, quarrying existing gypsum outcrops would not directly eliminate escape or foraging habitat useful to Peninsular bighorn sheep.

USG's proposed mining plan also would remove overburden material to expose below-ground gypsum for additional quarrying, especially in the unnamed wash running south to north along the length of the proposed Quarry expansion area. Wash vegetation is suitable (in fact, preferred) for Peninsular bighorn sheep foraging. Loss of this alluvial wash vegetation would eliminate suitable foraging habitat for Peninsular bighorn sheep using the area as a travel route, winter range, or lambing. Disturbance by mining operations would also tend to dissuade Peninsular bighorn sheep from foraging in undisturbed alluvial wash habitat adjacent to active quarry areas, or from traveling across adjacent mountain slopes. Mining disturbance would probably prevent ewes from using the nearby area for lambing throughout the years of active mining at that southern end of the site.

Increased narrow-gauge rail traffic could proportionally increase the likelihood of Peninsular bighorn sheep mortality on the tracks and increase noise and disturbance effects on and around the railroad tracks, tending to dissuade Peninsular bighorn sheep from using the area. No Peninsular bighorn sheep has ever been struck on the tracks, thus the risk from increased rail traffic cannot be accurately quantified, but is very low and less than significant. Documented Peninsular bighorn sheep occurrences in the area are so scarce that potential Project effects to Peninsular bighorn sheep behavior or habitat use around the rail line are low.

Part of the narrow-gauge rail alignment was termed essential habitat in the Recovery Plan and designated as critical habitat in 2001, and some of the alignment still is within critical habitat, according to the Consent Decree described above. In the Recovery Plan, these lands were deemed "essential habitat" because of their proximity to steep mountains and potential to provide good-quality forage. The Recovery Plan specifically avoided terming valley floors between mountain ranges as "essential habitat" for long-distance migration among mountain ranges.

Significance of Impacts

Adverse effects to foraging habitat, including foraging habitat in the wash, would not be significant because similar habitat is widespread and abundant throughout the region, including lands within Peninsular bighorn sheep ewe group home ranges. Adverse effects to local movement habitat (e.g., across the mouth of the canyon) also would not be significant because the Project would not substantially increase barriers or impediments to local movement beyond the existing conditions (Peninsular bighorn sheep can and do occasionally cross haul roads, rail lines, and quarries). Further, suitable movement habitat on ridges and steep mountain slopes to the west, south, and southeast would be unaffected.

The lower bajadas and desert floor north of the Project area (i.e., Lower Borrego Valley) might rarely be used to travel from the Fish Creek Mountains to the southern Santa Rosa Mountains, but the likelihood that a Peninsular bighorn sheep might survive that journey seems very low. This area is not considered essential habitat by the USFWS, and the Quarry Project would have no measurable effect on long-distance movement across Lower Borrego Valley.

Adverse effects of mining disturbance on lambing habitat and winter range to the south and southeast of the Quarry Project area, and perhaps extending onto the southern part of the Project area, would meet CEQA criteria as significant if not mitigated.

The adverse effect of increased likelihood of Peninsular bighorn sheep mortality on the narrow-gauge rail line cannot be quantified, but the critical habitat designation on part of the rail line creates a Section 7 nexus and will be addressed through consultation with the USFWS.

Section 7 Consultation

A portion of the existing narrow-gauge rail line is currently within designated critical habitat for Peninsular bighorn sheep. Furthermore, under the proposed rule discussed above, portions of the Quarry would also lie within designated critical habitat for Peninsular bighorn sheep.

Section 7 of the federal Endangered Species Act requires consultation with the USFWS by federal agencies that fund, authorize, or carry out projects that would “take” listed species or cause “adverse modification” of critical habitat. The BLM anticipates consulting with the USFWS under Section 7 of the federal Endangered Species Act. The BLM will submit a Biological Assessment, describing the Project, including all proposed mitigation, and analyzing its potential impacts to Peninsular bighorn sheep.

The USFWS will issue a Biological Opinion that will include measures that will ensure that the Proposed Action will not jeopardize the continued existence of Peninsular bighorn sheep, or cause adverse modification of designated critical habitat. It is the intention of BLM, Imperial County, and USG to mitigate potential Project impacts to Peninsular bighorn sheep essential habitat or critical habitat to ensure that the Project will not jeopardize the Peninsular bighorn sheep’s survival or recovery. Proposed mitigation measures for potential impacts to Peninsular bighorn sheep or their habitat, including designated critical habitat along the existing rail line, are listed in Section 3.5 of the Draft EIR/EIS. The following measures are added to supplement those in the Draft EIR/EIS.

1. Mining shall be conducted only as approved in the Plan of Operation and the Mine Reclamation Plan. Reclamation shall be conducted concurrently with mining and it shall be initiated within each phase as soon as is feasible. Reclamation shall include slope contouring and revegetation with native plant species as specified in the Reclamation Plan.
2. USG shall instruct its employees and other visitors to the mine to avoid Peninsular bighorn sheep. Access to undisturbed lands by humans on foot shall be restricted, and usually would include only biologists and mining personnel. USG shall establish a training program, including new-employee orientation and annual refresher, to educate employees regarding Peninsular bighorn sheep and the importance of avoidance.
3. USG shall not allow domestic animals (cattle, sheep, donkeys, dogs, etc.) onto the mine site or any lands under USG control. Training for mine employees shall include instructions to report observations of domestic animals to the quarry's environmental manager. Upon receiving any such reports, the environmental manager shall contact the appropriate authorities for removal of domestic animals.

Section 7 consultation and the above measures would apply whether or not the proposed rule for critical habitat is adopted.

4.3.2 Desert Pupfish

Several letters commented on potential Project impacts to desert pupfish. The following discussion supplements the Draft EIR/EIS in response to these comments. The Draft EIR/EIS identifies potential impacts to desert pupfish and analyzes them in Section 3.5 (pp. 3.5-32 – 3.5-34 and Figures 3.5-4 and 3.5-5) and in Appendices B (Hydrology) and C (Biological Resources). The Draft EIR/EIS concludes that impacts from the Project, including the Quarry “are not likely to have adverse impacts on the desert pupfish”, Subsection 3.5.3.2, Impact 3.5-1, page 3.5-32.

Desert pupfish (*Cyprinodon macularius*) is listed as endangered under both the state and federal Endangered Species Acts. Historically, desert pupfish were widespread and common in shallow water of stream margins, marshes, springs, and slow-flowing reaches of major rivers in the lower Gila River and Colorado River watersheds in Arizona, California, Baja California, and Sonora Mexico. Desert pupfish were first documented in the Salton Sea in the 1920s following its most recent inundation in the early 1900s when the Colorado River was diverted west into the Salton Sink (USFWS

1993). The source of these fish may have been upstream Colorado River populations, or local indigenous populations in previously-isolated desert wetlands. Geologic history and the occurrence of the same desert pupfish species in isolated locations suggests a long-term dispersal pattern via periodic flooding and subsequent isolation during drying periods. Desert pupfish is exceptionally hardy, surviving in a broad range of water chemistry and temperature regimes, but is vulnerable to competition and predation by non-native species.

The desert pupfish is endangered due to habitat loss and the introduction of non-native competitors and predators (e.g., Tilapia) into its habitat (Minckley et al. 1991; USFWS 1986; Moyle 2002). Dam construction on several of its river and tributary habitats in Arizona and on the Colorado River inundated some occurrences and dewatered others. Surface water diversions have eliminated habitat in some areas, and lowered water tables due to groundwater pumping and groundwater use by invasive shrubs (*Tamarix ramosissima*) have eliminated other occurrences (USFWS 1986, 1993; CDFG 2005). Agricultural pollution may threaten some occurrences. In California, desert pupfish populations persist in native populations, at San Sebastian Marsh and upstream in San Felipe Creek (about 11 miles northeast of the Quarry project site, Appendix C-2 of the Draft EIR/EIS, Map 5) and tributaries (Imperial County), at Salt Creek (Riverside County), and in shoreline pools and irrigation ditches around the Salton Sea (USFWS 1993). They also persist in irrigation canals near the Salton Sea and in a few introduced “refugia” sites, including three in Anza Borrego Desert State Park.

The USFWS designated critical habitat for desert pupfish at San Sebastian Marsh and along portions of its tributaries, San Felipe Creek, Carrizo Wash, and Fish Creek Wash in Imperial County (USFWS 1986). The USG Quarry and proposed Quarry Project are within the watershed of Fish Creek Wash and the proposed Quarry Well No. 3 is in the Carrizo Wash watershed (Draft EIR/EIS Map 3.5-4). Public lands in this area are also managed as an Area of Critical Environmental Concern (ACEC) by the BLM. In the critical habitat designation, the USFWS listed several activities that could adversely modify critical habitat, including withdrawal of water, either directly or indirectly, from San Sebastian Marsh. The USFWS published a Desert Pupfish Recovery Plan in 1993 with recommendations for land management and recovery (Desert Pupfish Recovery Plan, USFWS, Phoenix, AZ., September 1993).

Desert pupfish are absent from the USG Quarry and Plant Project sites due to the absence of perennial surface water. Critical habitat at San Felipe Creek, Carrizo Wash, and Fish Creek Wash and occupied habitat at San Sebastian Marsh are about 7 miles northeast of proposed Quarry Well No. 3, 11 miles northeast of the Quarry, about

20 miles north of the Plaster City Plant, and about 24 miles north of the proposed wells near Ocotillo (USFWS 1986). All elements of the proposed Project are shown on Maps 3.5-2 and 3.5-3 in the Draft EIR/EIS; Fish Creek and San Felipe Creek are near the top of both maps, identified on the underlying base map but otherwise not labeled. The San Sebastian Marsh watershed, including the desert pupfish occurrence, and the proposed USG Quarry and Quarry Well No. 3 are shown on Map 3.5-4 in the Draft EIR/EIS. The proposed Project has no potential for direct on-site impacts to desert pupfish.

Desert Pupfish Hydrology

The potential impacts of mining through the use of diversion of water on desert pupfish is discussed in the Draft EIR/EIS Section 3.5 beginning on page 3.5-22 and potential impact Subsection 3.5-2, page 3.5-43. The analysis is further supported by technical Appendix C-4, Hydrologic Impacts attachment to the biological technical report and Appendix C-5 potential impacts of pumping from Quarry Well No. 3, Volume II Draft EIR/EIS April 2006.

Hydrologists preparing the analysis have concluded that no impacts will occur to basin water supplies or to San Felipe Creek located approximately 11 miles away from the Quarry operation. The analysis shows a drainage area contributing to the San Felipe Creek of 965,388 acres with a volume calculated on annual average precipitation of 583,883 acre-feet of water. The Quarry, including the planned expansion area, contributes 396 acre-feet of water to the basin (.07 percent by volume). This would assume that all the water is diverted and no percolation or evaporation of rainwater occurs. In fact surface drainage would continue uninterrupted with all drainage from the Quarry directed to the wash.

Hydrogeologists also addressed the possible impacts of withdrawing approximately 26 acre-feet per year of well water from the same basin for use at the Quarry. A calculated draw down of the proposed well at maximum capacity would have a draw down at Fish Creek and San Felipe Creek Springs of approximately 1 millimeter. This is a conservative estimate because values produced by the Theis equation are for drawdowns in confined aquifers. However, the aquifer in the well area is unconfined, and drawdowns will be much less than those for a confined aquifer. Pumping 26 acre-feet per year from an unconfined aquifer will not produce drawdowns that are noticeable at distances of 1,000 feet or less. Additionally, the location of the San Jacinto Fault, a probable groundwater barrier between the well and Fish Creek and San Felipe Creek Springs, would most likely prevent a cone of depression extending beyond the fault. Thus, the extraction of water from the well at capacity will not have a detectable impact directly or cumulatively on habitat supporting the desert pupfish.

4.3.3 Flat-tail Horned Lizard

Several letters commented on potential Project impacts to flat-tailed horned lizard (FTHL). The following discussion supplements the Draft EIR/EIS in response to these comments and to reflect more recent research findings and revisions to FTHL's agency status. The Draft EIR/EIS discusses the FTHL in Section 3.5 on pages 3.5-16 to 17.

The FTHL (*Phrynosoma mcallii*) is found primarily in windblown sand dunes and partially stabilized sand flats, but also occurs in other habitat types, including salt flats, badland slopes and washes, desert pavement, and gravelly soils. Until about 2003, when the FTHL Rangewide Management Strategy was updated by the FTHL Interagency Coordinating Committee, biologists considered FTHL to be strictly endemic to windblown sand. For example, Jennings and Hayes (1994) described it as "a specialized sand-dweller that has not been observed outside of areas with a shifting sand substrate." But even where they are found in these other habitat types, they occur in areas where windblown sand deposits occur (FTHL Interagency Coordinating Committee 2003; USFWS 2006).

FTHL over winter by burying themselves in loose sand at depths to about 10 cm., and adults apparently must hibernate due to physiological and behavioral constraints (Mayhew 1965). They also may bury themselves in sand to escape predators or extreme high temperatures during their summer activity period, but may also avoid predators by remaining still and depending on their camouflage coloration (FTHL Interagency Coordinating Committee 2003). FTHL home ranges can be as large as about 7 acres (Muth and Fisher 1992, cited by FTHL Interagency Coordinating Committee 2003). FTHL may use a variety of habitat types, but apparently must have fine sands somewhere within their home ranges to allow winter hibernation. Thus, FTHL could occur in any of the Project area segments, including the proposed Quarry area, proposed pipeline routes, along the narrow-gauge rail line, or the Plant areas. The highest quality FTHL habitat in the USG Project area is the windblown sand along the narrow-gauge rail line between the Quarry and Plant. Much of this area is within the FTHL West Mesa Management Area (discussed below).

FTHL is not currently listed, proposed for listing, or a candidate for listing under state or federal Endangered Species Acts. FTHL was first proposed for federal listing as threatened in 1993. Since then the listing proposal was withdrawn in 1997, then reinstated in 2001, withdrawn in 2003, reinstated in 2005, and withdrawn again in 2006. The history of these listing proposals and withdrawals is reviewed in the most recent withdrawal (USFWS 2006). Both reinstatements followed court decisions in which

plaintiffs held that the USFWS had not adequately considered ongoing habitat loss in the Coachella Valley (2001) and more extensive historic habitat loss (2005). In 2003, the USFWS concluded that FTHL is in danger of extirpation in the Coachella Valley but not threatened or endangered throughout the remainder of its range (including its range “on the west side of the Salton Sea / Imperial Valley”) and listing was therefore not warranted. In 2006, the USFWS concluded that historic habitat loss was not a significant portion of its range and concluded that the FTHL “is not likely to become in danger of extinction in the foreseeable future throughout all or a substantial portion of its range.”

All three withdrawals of the proposed listing (1997, 2003, 2006) emphasized multi-agency commitment to the FTHL Rangewide Management Strategy (first released in 1997 and updated in 2003) in support of the USFWS’s conclusions that FTHL does not warrant listing. The Rangewide Management Strategy commits several agencies including the BLM to specific management, monitoring, and mitigation measures to ensure that FTHL does not become threatened. Moreover, it maps several FTHL Management Areas where management, monitoring, and mitigation measures are more rigorous than elsewhere. The FTHL West Mesa Management Area and all known FTHL occurrences from the region are shown on Figure 3.5-3 of the Draft EIR/EIS. (Note typo in Figure 3.5-3 “Boundary of HTHL”, should read “FTHL” this will be corrected in the final document.)

Part of the Project area (the existing rail line) crosses the FTHL West Mesa Management Area. The remainder of the Project area is within FTHL’s geographic range, but much of the Project area is in poorly suitable habitat due to absence of windblown sand and patchy occurrence of suitable sandy deposits from other sources (mainly alluvial fine sand deposits). Protocol FTHL surveys were conducted along the proposed water line between Ocotillo and the Plaster City Plant. These surveys were negative (see Appendix C-1 of the Draft EIR/EIS). There is a high probability that FTHL occurs along the existing rail line and a low probability that it may occur elsewhere in the Project area.

As discussed in Section 3.5 on page 3.5-47 of the Draft EIR/EIS, Mitigation Measure 3.5-2 requires compliance with standard mitigation measures contained within the Rangewide Management Strategy. Mitigation requirements for impacts to FTHL or its habitat are described in detail in the Rangewide Management Strategy and summarized in Appendices C-1 and C-2 of the Draft EIR/EIS. As a Lead Agency on the Draft EIR/EIS the BLM will comply with these measures should it ultimately approve the Proposed Action. Thus, the potential impacts of any project-related disturbances to FTHL or its habitat including mining, facilities construction, maintenance, or other activities, are reduced to a level of insignificance.

4.3.4 Water Use Alternative

The Draft EIR/EIS describes a range of alternatives to the Project that would avoid or substantially lessen the potential significant effects on groundwater resources. Most notably, the Draft EIR/EIS discusses two alternatives that would require USG to obtain water from the Imperial Irrigation District (IID) to supply all or a portion of the water needed for Plant operations. These alternatives were identified in the Draft EIR/EIS as the "partial use" of IID water alternative and the "full use" of IID water alternative.

Several commenters urged the adoption of one or more of the alternatives discussed in the Draft EIR/EIS, and others requested more information concerning their feasibility. Pursuant to Section 15126.6 of the CEQA Guidelines, an EIR must consider a reasonable range of potentially feasible alternatives that will foster informed decisionmaking and public participation. However, an EIR is not required to analyze the feasibility of such alternatives. Rather, under CEQA, it is the public agency, not the EIR, that bears responsibility for making findings as to whether specific economic, legal, social, technological, or other considerations make infeasible the alternatives identified in the EIR. See *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco*, 102 Cal.App.4th 656, 689-91 (2002).

At the time the Draft EIR/EIS was prepared, both the "partial use" and "full use" of IID water alternatives were considered to be "potentially" feasible. However, the Draft EIR/EIS did not (and is not required to) determine whether either of these alternatives was feasible. In fact, the Draft EIR/EIS noted that each of these alternatives would require various approvals from other agencies (including a service agreement with the IID) and that the legal, social, political and economic feasibility of obtaining water from the IID was "unknown."

Following the issuance of the Draft EIR/EIS for public comment, USG has taken further steps to investigate the feasibility of the "partial use" and "full use" alternatives. Additional information concerning these alternatives is provided below.

Full Use of IID Water

Under the "full use" alternative, 100 percent of the water needed for Plant operations would be supplied by IID pursuant to a water service agreement and transported to the Plant via a new water pipeline extending from the Westside Main Canal to the Plant. Among other things, implementation of this alternative would require:

- Construction of larger water storage facilities;

- Settling ponds to clear the water of suspended solids;
- A desalinization plant with associated evaporation ponds (approximately 20 acres) for brine removal;
- Wastewater handling facilities to process concentrated salty water; and
- A water treatment facility to produce potable water for Plant personnel.

This alternative would require the disturbance of up to an additional 30 acres of land. This alternative would also require approximately proportionately 25 percent extra canal water than the "partial use" alternative discussed in the Draft EIR/EIS to account for water evaporation during the desalinization and evaporation processes. Additionally, fluctuating salinity of canal water over time presents technical and practical issues that cannot be overcome. Based on these environmental and technological factors, the "full use" alternative is infeasible.

Partial Use of IID Water Alternative

Under the "partial use" alternative, only a portion of the water needed for the Plant operations would be supplied by the IID. The balance (up to a maximum of approximately 400 acre-feet per year) would continue to be supplied by USG's existing wells in Ocotillo. Water from IID would be blended with water from Ocotillo to achieve the level of water quality need for use in manufacturing wallboard without the need for further treatment of the process water. The Plant site is part of the area that can be included within the boundaries of the IID under the All-American Canal Contract dated December 1, 1932.

The Applicant is currently investigating the feasibility of implementing the "partial use" alternative. Toward this end, representatives of USG met with IID staff to discuss a "potential partnership" to provide water to the Plant. To more fully evaluate this alternative, IID staff advised USG to file a Petition for Inclusion within the boundaries of the IID. In accordance with this advice, USG filed a Petition for Inclusion with the IID for the purpose of providing up to 1,000 acre-feet per year of water from IID to be used exclusively by USG in its operations. In April 2006, the IID Board adopted a Resolution of Application requesting that the Local Agency Formation Commission (LAFCO) of Imperial County take such action as may be necessary to grant USG's application for inclusion in the IID. USG's application was subsequently accepted by LAFCO and is currently under review.

In connection with its LAFCO application, USG has engaged in preliminary engineering studies and has determined that the 5.5-mile pipeline from the Westside Main Canal to the Plant would likely run along the railroad tracks within the San Diego and Arizona

Eastern Railroad right-of-way that parallels Evan Hewes Highway. The proposed Project would provide for the installation of a pipeline, pumping station, and holding basins, designed for a water supply of 1,000 AF/Yr of IID untreated canal water to be utilized for all process purposes.

The proposed facility design is based on the following:

- The facility design flow will be 1,000 AF/Yr (620 gallons per minute [gpm])
- To provide this flow, a duplex pump station with flow capacity of 620 gpm for each pump will be provided
- Two holding basins will be provided with a total of 2 days storage capacity (total of 1.8 million gallons)
- The connection to the board lines will be made downstream of the back flow preventer before the process water tanks. Each board line (i.e., board lines 1 and 3) will have a dedicated process water line from the holding basin. Each process water line will have a flow monitoring device and a plug valve for isolation.

Additional engineering and environmental studies are underway.

Although USG is actively investigating the "partial use" alternative and has applied for inclusion within the IID boundaries, the feasibility of this alternative remains unknown. Consequently, the description of the Project has not changed with respect to the proposed sources of water and manner of delivery to the Plant.

4.3.5 Imperial County's Groundwater Management Ordinance

In 1998, the County adopted a comprehensive Groundwater Management Ordinance (Groundwater Ordinance) for the express purpose of preserving and managing groundwater resources within the County. The Groundwater Ordinance is codified as Chapter 1 of Title 9 of the Imperial County Code. The Groundwater Ordinance establishes that the 10-member Imperial County Planning Commission (Commission) appointed by the Board of Supervisors is charged with regulating groundwater and can request preparation of an annual report on groundwater supplies and conditions, determine the need for and recommend groundwater management activities (see Section 92202.00), recommend groundwater extraction standards and charges, and establish standards for artificial recharge, among other things. The County Planning and Development Director performs the duties assigned by the Commission.

The Groundwater Ordinance provides the County with various regulatory tools that are designed to avoid or minimize the impact of existing and proposed groundwater extraction activities on groundwater resources and other users. For example, Section 92201.13 provides a remedy for water users who are aggrieved by "well interference" (defined as a substantial water level decline in a short time period in a localized area caused by extraction) or other impairment or infringement of the groundwater use caused by the extraction activities of another party. In such cases, the Commission may issue any order that it determines necessary to provide the petitioning water user with an adequate remedy. Additionally, pursuant to Section 92202.07, the Board of Supervisors, after notice to the public and hearing, may adopt reasonable operating regulations on extraction facilities to minimize well interference. This portion of the Groundwater Ordinance further supports a conclusion that the potential impacts of the Project on neighboring wells will be less than significant after mitigation.

Chapter 4 of the Groundwater Ordinance establishes priority among groundwater users in the event of existing or threatened overdraft conditions. Pursuant to these regulations, overlying domestic uses either (a) legally existing on the effective date of the Groundwater Ordinance, or (b) developed thereafter on property zoned "R-1" or "R-2" on the effective date of the Groundwater Ordinance, would have priority over USG's groundwater usage in the case of an existing or threatened overdraft of the Ocotillo-Coyote Wells Groundwater Basin (Basin).

The Groundwater Ordinance also requires that existing extraction facilities be registered with the County. On March 8, 2006, the County Planning & Development Services Director (Director) approved, with conditions, registrations for USG's three existing water wells used to extract groundwater from the Basin and for the water pipeline used to transport water to the Plant. A copy of the Director's March 8, 2006 approval letter is attached. Condition No. T-2 of the approval letter states that "767 acre-feet (AC FT) of groundwater per year is the maximum amount of groundwater extraction & exportation allowed for the combined wells . . . based on 7 days per week/52 weeks per year calculation." The approval letter also states that if "USG increases the water extraction above the 767 acre-feet per year limit for these three wells, an application for a Conditional Use Permit with approval by the Planning Commission and/or Board of Supervisors is necessary."

Several comments state that USG's extraction of groundwater in Ocotillo and its delivery through the 8.5 mile pipeline to the Plaster City Plant is an "export" of groundwater. However, the Groundwater Ordinance defines "export" to mean "groundwater extracted for use outside the boundaries of the groundwater basin from

which the groundwater is derived, or outside the County. ..." The transportation of water from Ocotillo to the Plant is not an export because the plant overlies the Basin. Additionally, USG transports some water from the Plant to Quarry where it is used as potable water and for dust suppression. The amount of water that is railed to the Quarry is just over 1 percent of the water withdrawn from Ocotillo. The main purpose of the proposed Quarry Well No. 3 is for dust suppression at the Quarry. Once USG receives approval to install and use water from the proposed Quarry Well No. 3, the amount of Ocotillo water used at the Quarry will be significantly reduced.

The Groundwater Ordinance further supports a conclusion that the potential impacts of the Project on groundwater resources will be less than significant after mitigation.

4.3.6 Hydrology and Groundwater

Several comments request clarification of the influence of faults and other geologic structures on the flow of groundwater and the distribution of water quality in the Basin, especially with regard to evaluation of the potential impacts of USG pumping on basin water quality.

Background

Geology, faults, and water quality are discussed in the Draft EIR/EIS in Subsection 3.3.2.1. The current understanding of the interactions of the groundwater flow, aquifer properties and water quality make up the *hydrogeological conceptual model*. A summary is provided here of the current hydrogeological conceptual model for the Basin. This conceptual model is represented in the numerical groundwater model that was applied to relevant issues in the Draft EIR/EIS. Much of the conceptual model is based on the geologic interpretation of the distribution of the geologic units and locations of geologic structures such as faults and folds.

Geologic units in the Basin can be grouped as follows:

- Recent and Older Alluvium, composed of poorly consolidated older alluvial fan deposits and sand, underlies much of the basin floor and extends locally into large canyons of the surrounding mountains. Most wells drilled in the Ocotillo area are completed within the alluvium. The alluvial wells are noted for high yields and relatively good water quality.
- The Palm Springs Formation is composed of fluvial and deltaic sand, silt, and clay deposits deposited by the ancestral Colorado River during the early Pleistocene. Thicknesses can range up to several thousand feet. No pumping test

data were found for the Palm Springs Formation, but the aquifer properties (e.g., transmissivity and specific yield) are believed to be similar to that of the Imperial Formation.

- The Late Miocene to Pliocene Imperial Formation is generally described as a series of interbedded claystone and sandstone of dominantly marine origin. The Imperial Formation has an exposed thickness of over 1,500 feet in Yuha Basin. Wells drilled into the Imperial Formation typically have low yields and produce poor quality water.

Significant differences have been noted in the hydrogeologic properties, water levels, and water quality between the area near the community of Ocotillo and the area to the east. Near Ocotillo, transmissivities (aquifer properties describing the ease with which groundwater flows through the aquifer) have been noted as significantly higher than those to the east. Transmissivities have been measured in the range of 5,800 to 6,700 square feet per day (ft²/day) near Ocotillo, whereas transmissivities of 34 to 957 ft²/day have been noted in the eastern region.

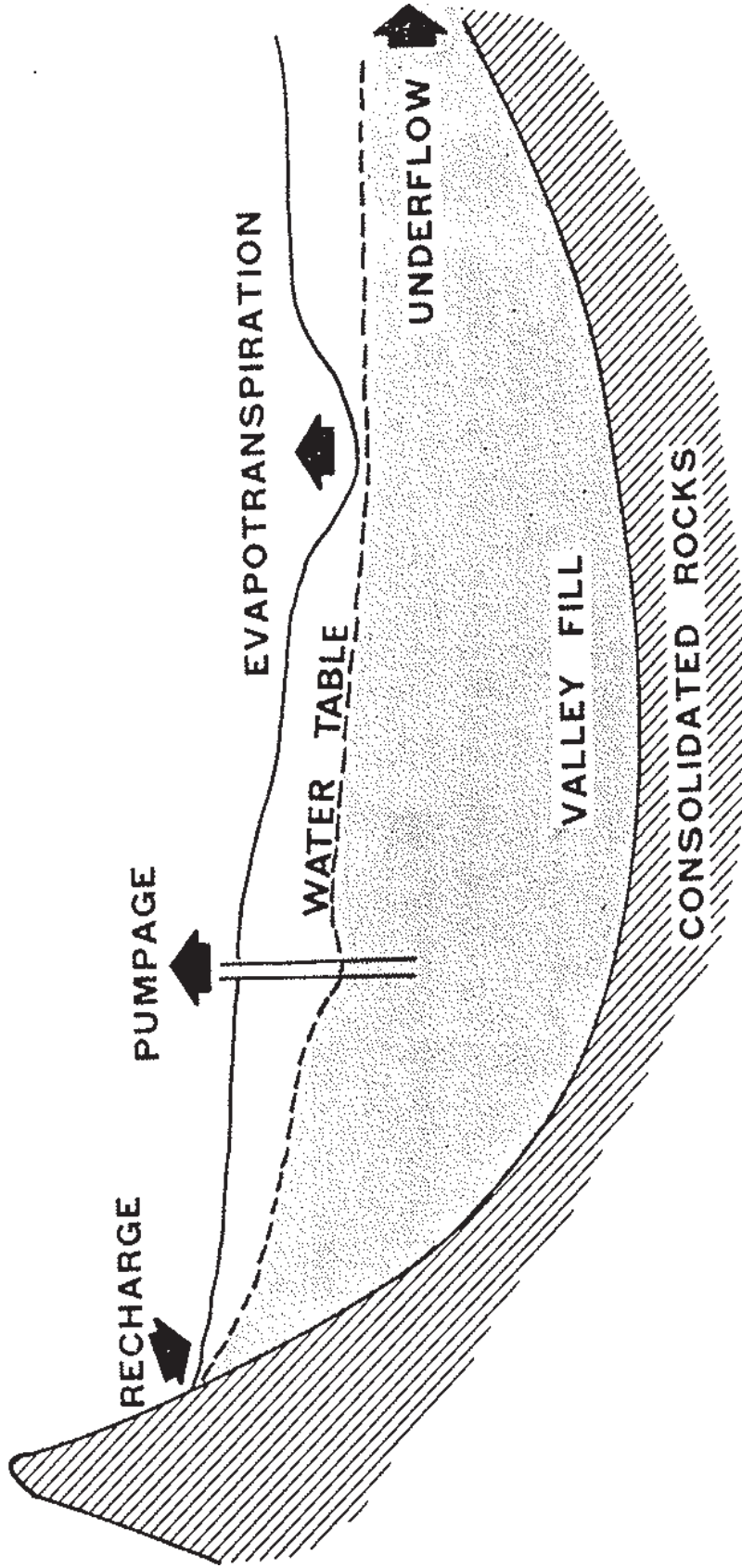
These variations are reflected in groundwater gradients: shallower (flatter) hydraulic gradients have been mapped in the Ocotillo area and steeper hydrologic gradients have been mapped in the area east of Ocotillo. Similarly, total dissolved solids (TDS) concentrations vary from east to west. Near Ocotillo, TDS concentrations typically range from 300 to 600 milligrams per liter (mg/l). East of Ocotillo, TDS concentrations are significantly higher and range from 600 to 4,000 mg/l.

Early Geologic Interpretation

The geologic interpretation developed by Skrivan (1977)¹ for the development of a numerical groundwater model of the basin is shown in Figure 1. This relatively simple interpretation assumes that the basin is composed of a relatively uniform thickness of alluvium (shown as valley fill) over the entire groundwater basin. The Palm Springs and Imperial formations were considered to underlie the water-bearing alluvial deposits (shown as consolidated rocks). Wells penetrating the aquifer are all considered to be completed within the alluvium and not within the Palm Springs or Imperial formations.

To account for variations in measured transmissivities (based on aquifer tests) and water quality data, Skrivan (1977) theorized that the Elsinore and Laguna Salada fault extends into the Basin and represents a hydraulic barrier with distinct water levels and

¹ See Draft EIR/EIS Appendix B2 for references used herein unless otherwise noted.



Source: Skriver, Figure 1, 1977.

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Figure 1
Conceptual
Cross Section (1977)

water quality on either side of the fault. In this interpretation, the alluvial deposits on the west side of the fault (near Ocotillo) had significantly higher transmissivities and lower TDS concentrations than those on the east side.

The primary weakness of this geologic interpretation is that it does not explain why the alluvial sediments vary so significantly on either side of the fault. A fault can cause a hydraulic barrier that can potentially restrict the flow of groundwater; however, other geologic differences are needed to explain both the variations of transmissivity and water quality.

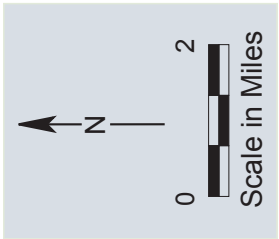
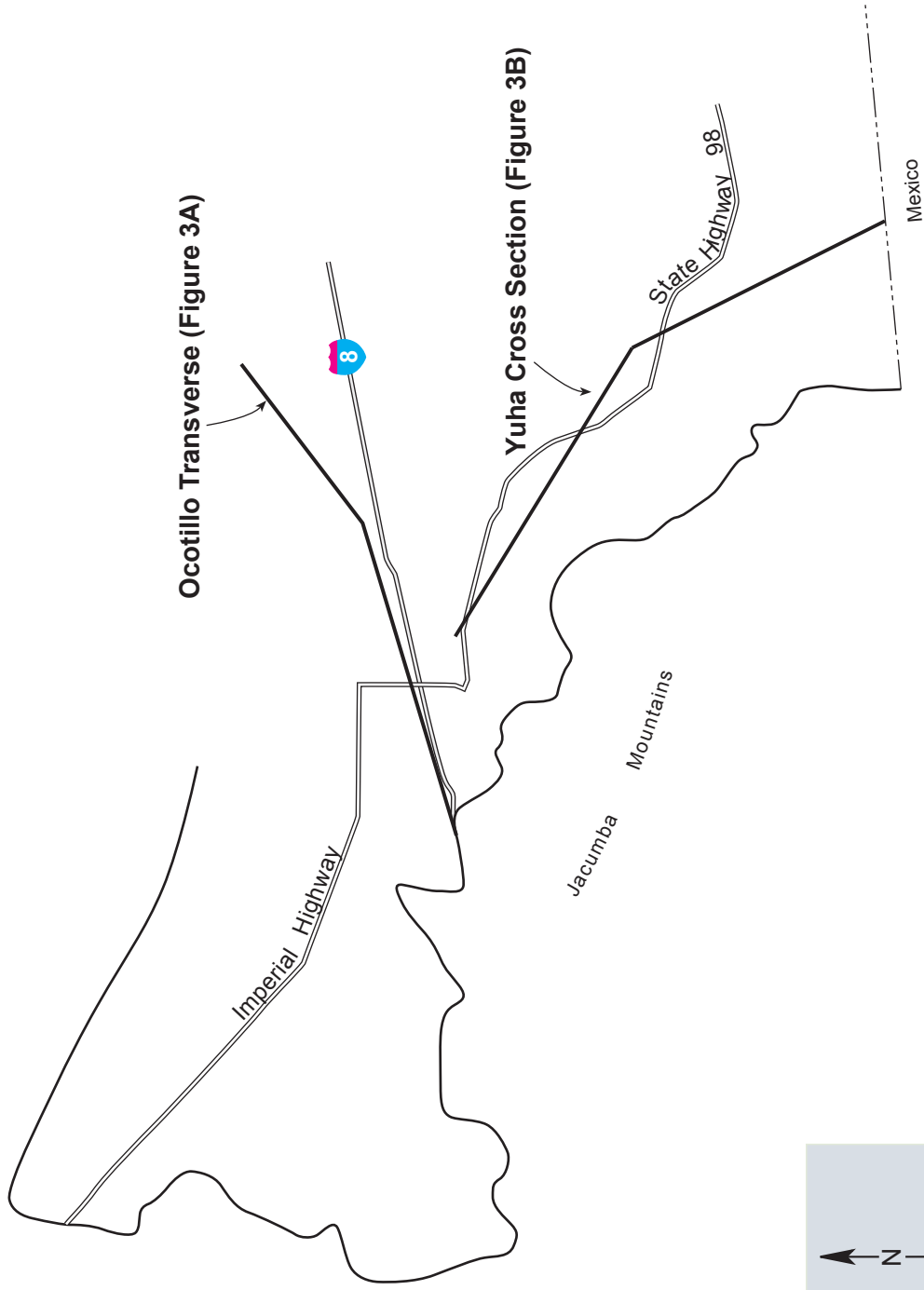
Current Geologic Interpretation

The geologic interpretation used in the 2004 Bookman-Edmonston study consists of a two-layer aquifer system in the basin rather than the single alluvial layer used in the previous interpretation. The upper layer (Layer 1) consists of the alluvial deposits and the lower layer (Layer 2) is composed of the Palm Springs and Imperial formations. Figure 2 shows the locations of two cross sections (Figure 3A and Figure 3B) illustrating the current geologic interpretation.

The revised geological interpretation is based on work by Dr. Thomas Rockwell, Ph.D. of San Diego State University. Through a series of master's theses and other work, the conclusion of this body of work is that the Elsinore and Laguna Salada faults are not continuous beneath the basin. Instead, the Elsinore and Laguna Salada faults are offset by zones of northeast-trending left-lateral faults. As a result of the complex interactions of these faults, the Palm Springs and Imperial formations have been uplifted in the area east of Ocotillo.

Accordingly, the Palm Springs and Imperial formations are relatively near the ground surface in the areas east of Ocotillo (Figure 3A). Therefore, the lower transmissivities obtained from aquifer tests from wells located east of Ocotillo are the result of these wells actually being completed in the lower-permeability Palm Springs and Imperial formations. The steeper hydraulic gradients are the result of groundwater flow through the relatively low-permeability Palm Springs and Imperial formations. The presence of the Palm Springs and Imperial formations also explains the higher TDS concentrations as these formations are noted for higher TDS concentrations. Additional discussion of water quality is provided below in the section "Water Quality."

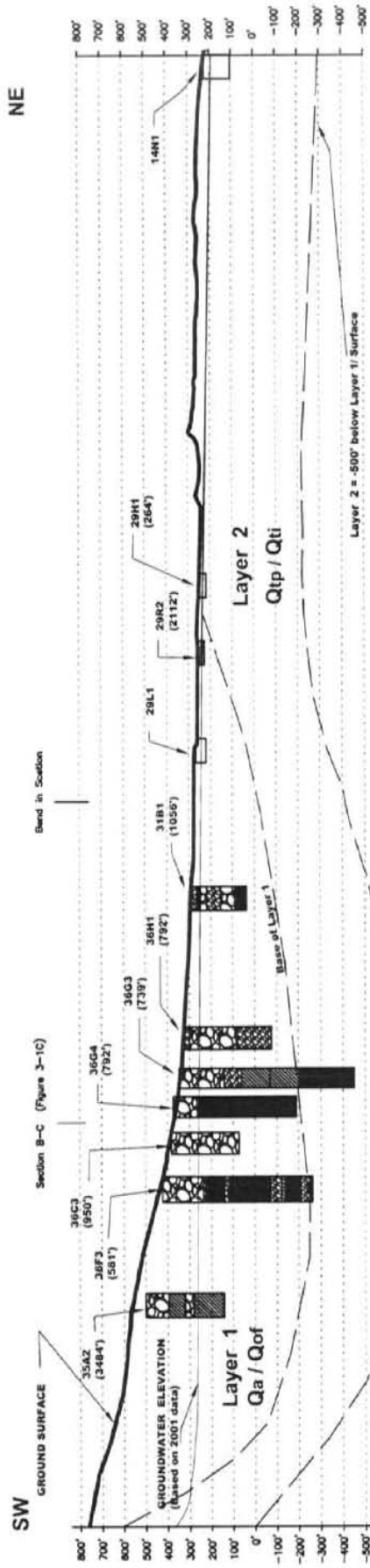
Based on this interpretation, the observed variations in groundwater can be more readily explained by variable thicknesses and depths to the Palm Springs and Imperial formations. In addition, it is recognized that a portion of the groundwater production is from the Palm Springs and Imperial formations rather than solely the alluvium.



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Figure 2
Cross Section
Locations

OCOTILLO GEOLOGIC CROSS-SECTION (TRANSVERSE)



NOTES:
Well diameters are not to scale.
All wells except wells 29L1 and 14N1 are projected.
Well projections are shown by () and
are not shown for well 14N1.
Distance between C-E equals 7.50 miles.

<p>Bookman-Edmonston A Division of GEC Consultants, Inc.</p>	<p>Ocotillo/Coyote Wells Groundwater Study</p> <p>Geologic Cross-Section (Ocotillo-Transverse)</p> <p>U.S. Gypsum Company</p>	<p>9/24/03</p>
	<p>FIGURE 3-1E</p>	

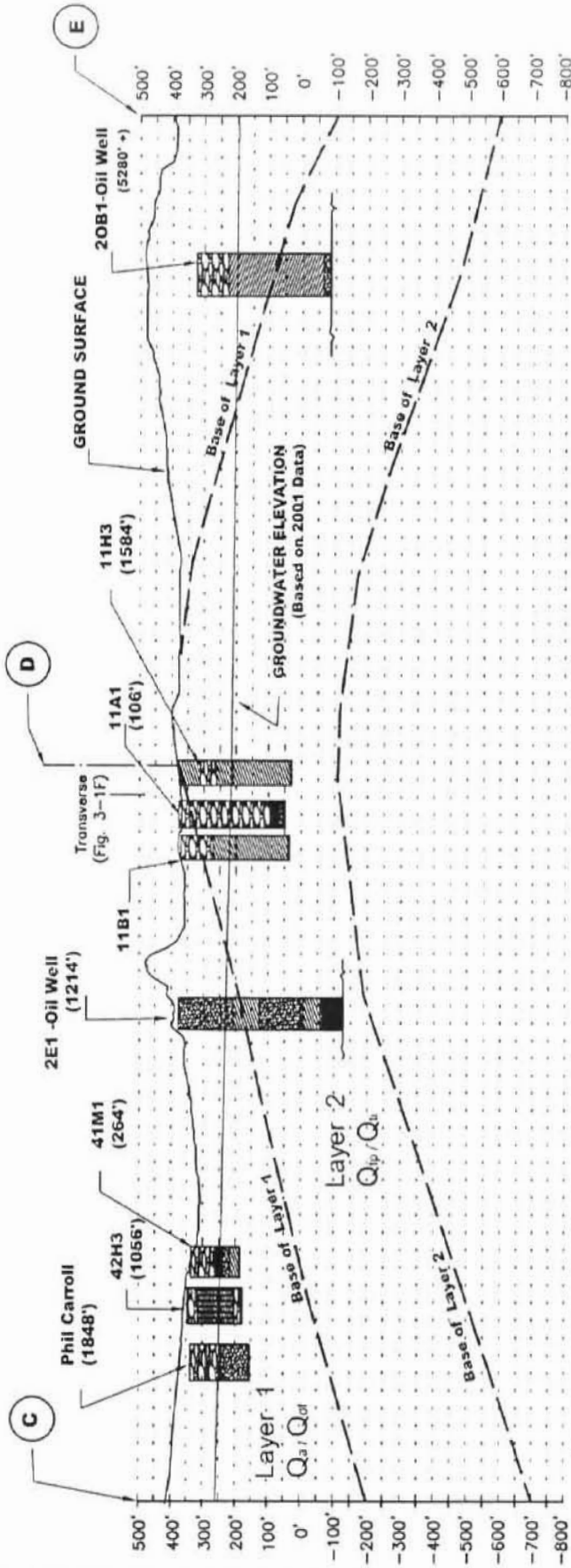
PROJECT NUMBER 33890

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Figure 3A
Cross Section
near Ocotillo

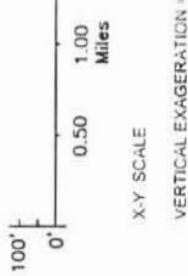
GEOLOGIC CROSS-SECTIONS (SECTIONS C - E)



LEGEND
(Unified Soil Classification System)

GP-GW	GC	SP-SW	SM-SC	CL
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NOTES:
Well diameters are not to scale.
All wells except 11B1 are projected.
Projections are shown () and are measured in feet.
Distance between C-E is 8.50 miles.



Φ Bookman-Edmonston
A Division of GEI Consultants, Inc.

Ocotillo/Coyote Wells Groundwater Study
Geologic Cross-Section
U.S. Gypsum Company

9/24/03
FIGURE 3-1D

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Figure 3B
Cross Section
near Yuha Estates

Using the revised geologic interpretation, the water-bearing alluvial deposits (Layer 1) are primarily restricted to the center of the basin. The alluvial thickness can be 550 feet or greater in the Ocotillo area. The alluvial deposits thin toward the margins of the basin where they become unsaturated. Along the basin margins, the saturated zones occur in the Palm Springs and Imperial formations.

Groundwater flow through the alluvium is generally towards the south. An anticline (a geologic fold in the form of an arch) has been mapped south of Ocotillo near Yuha Estates. This anticline causes the Palm Springs and Imperial formations to occur closer to the ground surface near the center of the anticline, as shown in Figure 3B. As a result, the alluvial aquifer is relatively narrow to the southwest of Yuha Estates and there is a restriction in the groundwater flow through the alluvium from north to south.

The wells in the Yuha Estates area are interpreted as being completed in the less permeable Palm Springs and Imperial formations. This provides an explanation for the more significant drawdown from pumping in these wells than those in the Ocotillo area.

Water Quality

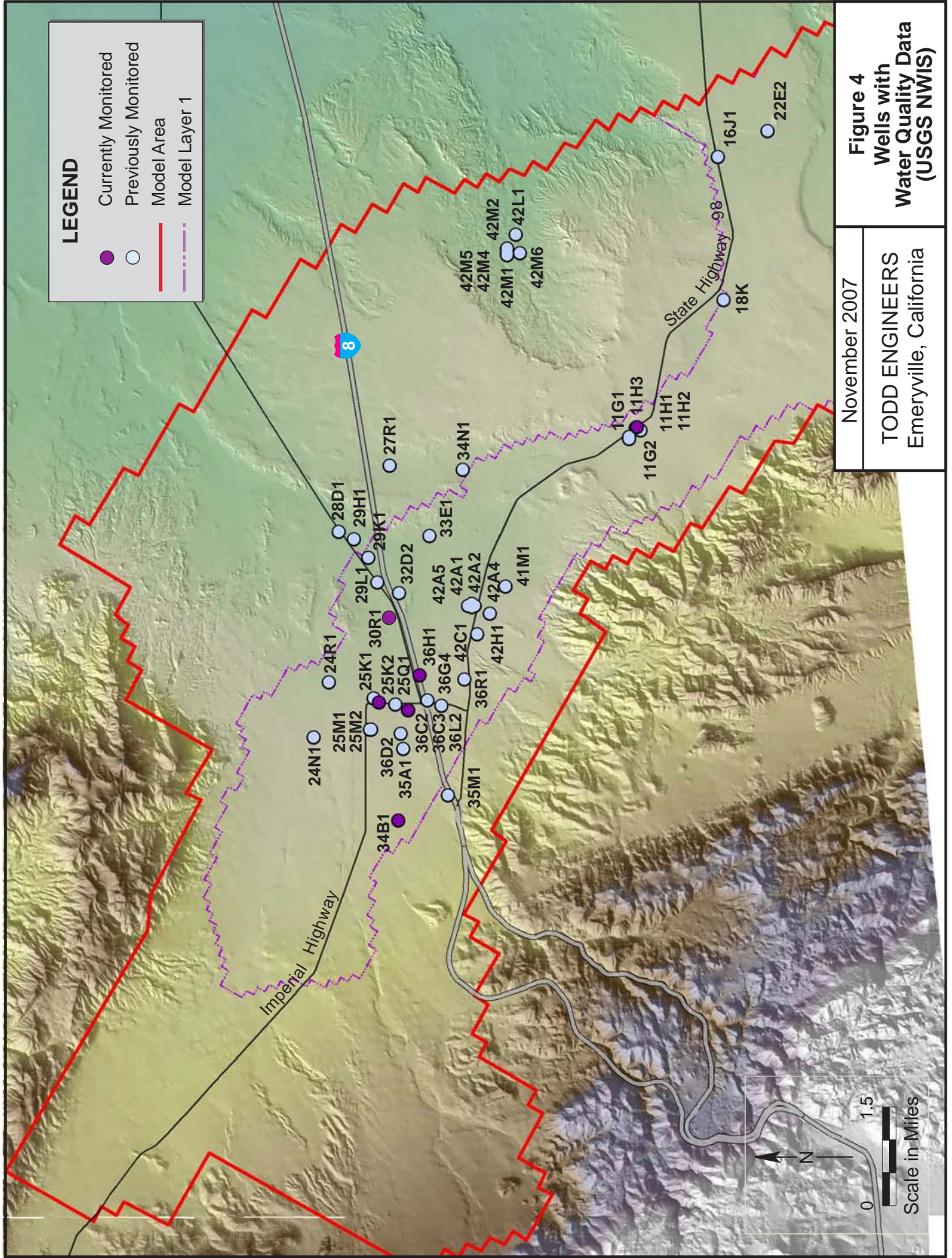
Several comments request recent water quality data. See the Draft EIR/EIS Subsection 3.3.3 on Groundwater Quality and Groundwater Chemistry Data for background and discussion.

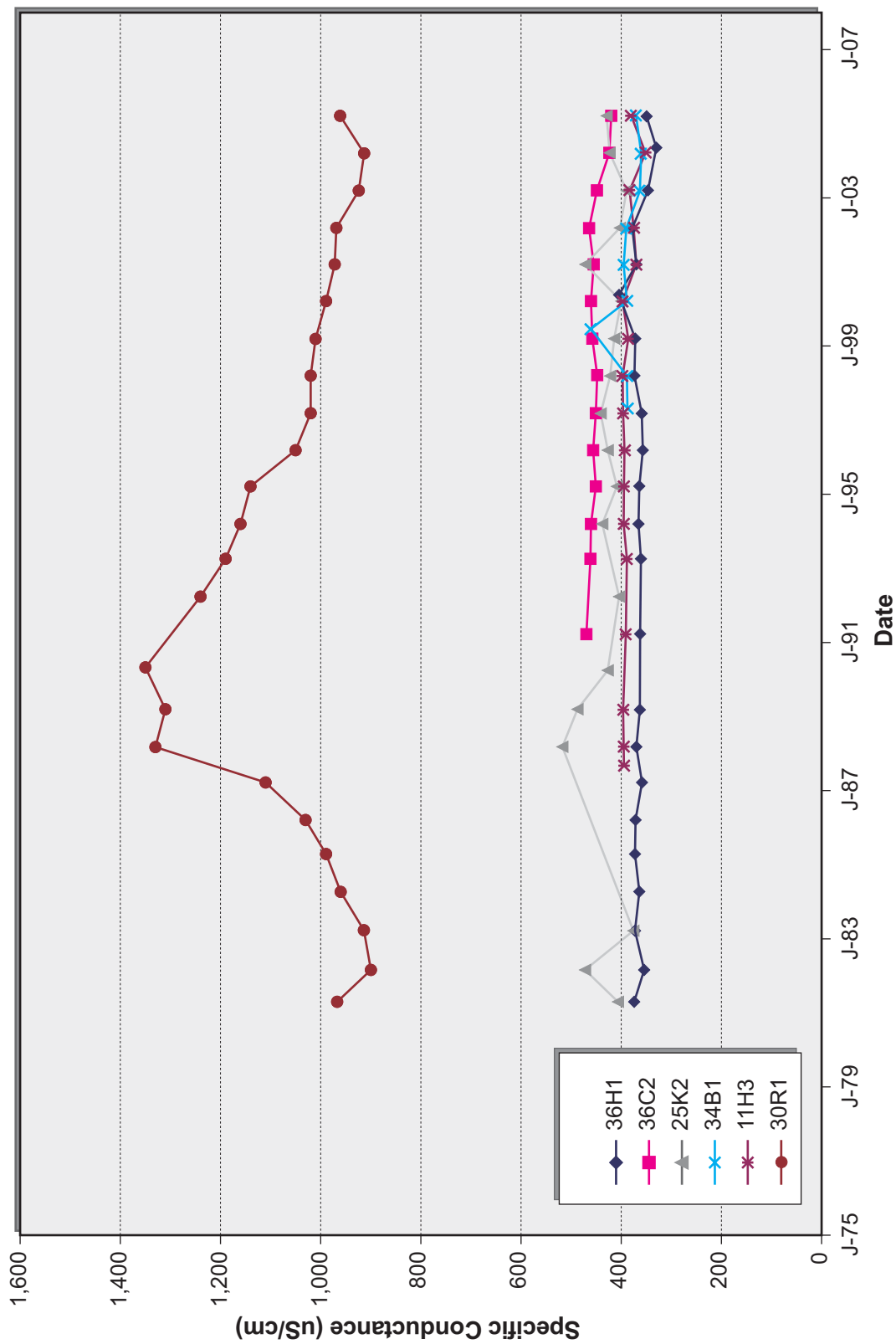
The United States Geological Survey (USGS) continues to monitor five wells in the Basin for water quality and 21 wells for water levels. Four of the five wells are located near Ocotillo and are screened in the alluvium; the other well is located near Yuha Estates. These wells are monitored on an annual basis for physical properties (hydrogen ion potential [pH], specific conductance, and temperature), general minerals (chloride, sodium, sulfate, etc.), iron, and manganese. In the USGS National Water Information System (NWIS), a total of 47 wells in the Basin have available water quality data. Table 4.0-1 summarizes the period of record for these wells and Figure 4 shows the locations of the wells. Wells that continue to be monitored are shaded purple.

Figure 5 shows the specific conductance for the wells currently monitored by the USGS. Specific conductance is a general indicator of the total dissolved solids in a water quality sample. TDS can be estimated as 75 percent of the specific conductance value. Aside from wells 25K2 and 30R1, specific conductance in the area appears to be fairly steady with a possible decrease in conductance over recent years (indicating improving water quality).

**Table 4.0-1
Water Quality Information Available from the USGS National Water Information System (NWIS)**

State Well Number	Label	Period of Record		Lat	Lon	Number of WQ Measurements
		Begin	End			
Wells with Recent Data						
17S 10E 11H3	11H3	15-Sep-87	31-Mar-05	32.68812	-115.923	513
16S 9E 34B1	34B1	06-May-97	31-Mar-05	32.74006	-116.024	285
16S 9E 36C2	36C2	08-Feb-61	29-Mar-05	32.73784	-115.996	495
16S 9E 25K2	25K2	01-Dec-72	29-Mar-05	32.74423	-115.994	731
16S 10E 30R1	30R1	27-Jun 59	30-Mar-05	32.74111	-115.9711	1630
16S 9E 36H1	36H1	07-Feb-63	24-Mar-05	32.73534	-115.987	784
Previously Monitored						
16S 10E 42A4	42A4	31-Jul-95	31-Jul-95	32.72395	-115.968	30
16S 10E 42A5	42A5	30-Dec-74	23-Mar-94	32.72478	-115.969	398
16S 9E 36D2	36D2	26-Jun-75	10-Apr-90	32.7395	-116.002	360
16S 9E 24R1	24R1	28-Apr-77	15-Mar-89	32.75506	-115.988	314
16S 10E 29L1	29L1	29-Apr-77	17-Mar-88	32.7445	-115.963	288
17S 10E 11H2	11H2	01-Apr-83	04-Apr-86	32.68839	-115.923	93
17S 10E 11G2	11G2	15-Nov-72	10-Mar-82	32.68978	-115.926	176
16S 10E 42H1	42H1	08-Jan-76	08-Jan-76	32.72006	-115.971	22
16S 10E 42C1	42C1	28-Jun-75	28-Jun-75	32.72284	-115.976	25
16S 10E 41M1	41M1	12-Oct-71	28-Jun-75	32.71673	-115.964	41
16S 9E 36G4	36G4	10-Jan-74	28-Jun-75	32.73367	-115.993	46
16S 9E 35M1	35M1	02-Jul-62	28-Jun-75	32.72923	-116.018	82
17S 10E 11H1	11H1	27-Jun-75	27-Jun-75	32.68728	-115.924	24
16S 10E 29K1	29K1	25-Jun-75	25-Jun-75	32.74645	-115.956	26
16S 9E 35A1	35A1	25-Jun-75	25-Jun-75	32.73895	-116.006	26
17S 11E 22E2	22E2	24-Jun-75	24-Jun-75	32.65951	-115.847	26
16S 11E 42L1	42L1	24-Jun-75	24-Jun-75	32.71423	-115.874	25
16S 10E 34N1	34N1	24-Jun-75	24-Jun-75	32.72589	-115.934	26
16S 10E 27R1	27R1	24-Jun-75	24-Jun-75	32.74173	-115.933	26
16S 9E 36L2	36L2	11-Mar-69	24-Jun-75	32.73062	-115.994	120
16S 9E 24N1	24N1	23-Jun-75	23-Jun-75	32.75839	-116.003	26
17S 11E 18K1	18K1	14-May-75	14-May-75	32.66923	-115.891	25
16S 11E 42M6	42M6	14-May-75	14-May-75	32.71339	-115.878	28
16S 10E 33E 1	33E1	13-May-75	13-May-75	32.73312	-115.951	28
16S 10E 29H1	29H1	13-May-75	13-May-75	32.7495	-115.952	28
16S 10E 42A2	42A2	30-Dec-74	30-Dec-74	32.72339	-115.969	3
16S 10E 42A1	42A1	30-Dec-74	30-Dec-74	32.72395	-115.969	6
16S 9E 25Q1	25Q1	27-Dec-74	30-Dec-74	32.74062	-115.994	10
16S 11E 42M4	42M4	04-Mar-58	23-Dec-74	32.71617	-115.878	45
17S 11E 16J1	16J1	29-Aug-72	11-Dec-74	32.67034	-115.854	37
16S 9E 25K1	25K1	15-May-59	20-Nov-74	32.74534	-115.993	144
17S 10E 11G1	11G1	00-Jan-00	15-Nov-72	32.68978	-115.926	108
16S 11E 42M5	42M5	18-Jan-49	22-Feb-72	32.71617	-115.879	27
16S 9E 25M2	25M2	20-Jan-71	04-Nov-71	32.74617	-116.001	39
16S 9E 36C3	36C3	20-Jan-71	20-Jan-71	32.73784	-115.996	25
16S 9E 25M1	25M1	06-Mar-62	22-Sep-67	32.74589	-116.001	44
16S 11E 42M2	42M2	18-Jan-49	23-Aug-62	32.71617	-115.877	21
16S 11E 42M1	42M1	18-Jan-49	23-Aug-62	32.71617	-115.877	33
16S 9E 36R1	36R1	17-Sep-48	19-Feb-58	32.72562	-115.988	47
16S 10E 28D1	28D1	16-Dec-48	16-Dec-48	32.75284	-115.95	16
16S 10E 32D2	32D2	07-Feb-18	07-Feb-18	32.73978	-115.966	17





Source: USGS NWIS.

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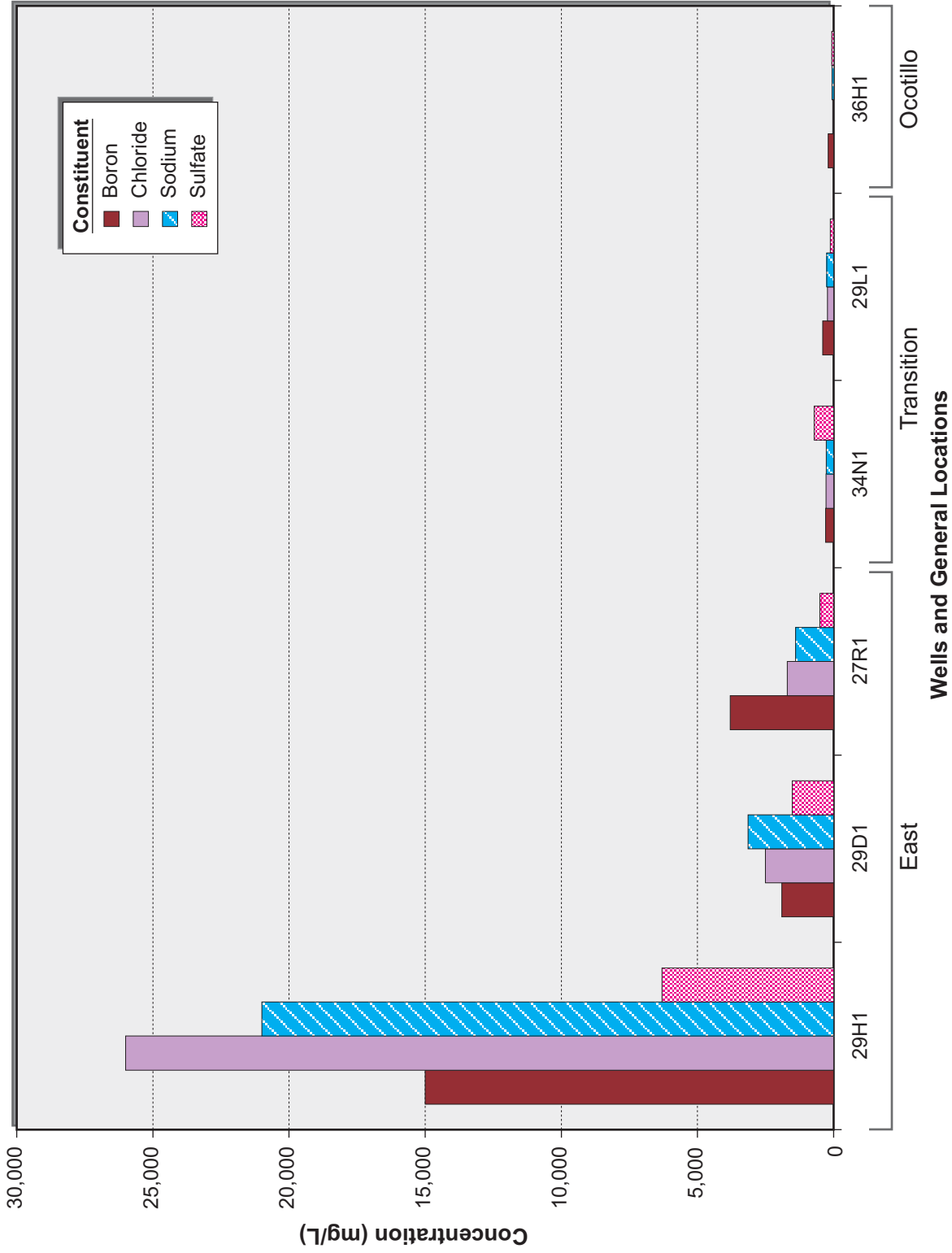
Figure 5
 Wells
 with Recent NWIS
 Water Quality Data

Well 25K2 is a pumping well and the variable water quality in the well may be affected by the amount of pumping. The increase in specific conductance in Well 25K2 in the early 1980's is linked to the increased pumping of Well 25K2 from 1974 to 1981 for export to Mexico. Well 30R1 shows an increase in specific conductance peaking in the late 1980s and subsequent decrease. The cause of this change in water quality in Well 30R1 is not known, but the available water quality data do not correlate to pumping of Well 25K2. In addition, no correlation is apparent to USG pumping. Bookman-Edmonston (1996) indicates that the well is relatively shallow (100 feet deep). The shallow depth of the well and short-term groundwater quality changes suggest a short-term surface or near-surface source of water quality degradation near Well 30R1.

A few of the comments referred to the differences in water quality between the areas near Ocotillo and the area to the east. To supplement the discussion of groundwater quality in the Draft EIR/EIS Subsection 3.3.2 (starting on page 3.3-17), a brief independent analysis was performed using readily available data from the NWIS. Table 4.0-2 shows the concentration of various general mineral constituents for wells in the east, wells near Ocotillo, and wells located in between these areas (herein termed the transition zone). Figure 6 shows the concentrations of boron, chloride, sodium, and sulfate for these wells. Wells located on the east have significantly higher concentrations than wells near Ocotillo. The difference is most likely due to the different geologic formations, as discussed previously and consistent with the hydrogeologic conceptual model. The high concentrations of chloride, sodium, and boron are indicative of the low-permeability Layer 2 (Palm Springs and Imperial) formations.

**Table 4.0-2
Comparison of Water Quality by Well Location**

Area	Units	East of Ocotillo			Transition		Near Ocotillo
Well Name		29H1	29D1	27R1	34N1	29L1	36H1
Parameter		Results					
Bicarbonate, unfiltered, field	MG/L	763	1060	159	151	170	125
Boron	UG/L	15000	1900	3800	300	400	200
Calcium	MG/L	140	3	16	170	13	20
Carbonate, unfiltered, field	MG/L	0	288	12		0	0
Chloride	MG/L	26000	2510	1700	280	230	66
Fluoride	MG/L	5		0.9	0.6	0.7	0.7
Iron, filtered	UG/L	80			<10	47	
Magnesium	MG/L	240	14	23	61	3.6	4.3
pH, field		7.3		9	7.8	8.6	8
Potassium	MG/L	72		17		5	3.9
Sodium	MG/L	21000	3140	1400	270	250	78
Specific conductance, field	uS/cm	74000		6000	2100	1360	525
Sulfate	MG/L	6300	1520	510	720	120	33
Sample Date		M-75	D-48	J-75	J-75	A-77	A-77



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Figure 6
Water Quality
Trend Differences
by Area

Water Levels

A number of comments on the Draft EIR/EIS refer to the limited discussion of observed long term water level trends and the lack of recent water level data. Water levels are discussed in Subsection 3.3.3.3 of the Draft EIR/EIS. Comments highlight the differences in water levels trends between various wells in the basin and note the continuing water level declines at some wells. Comments concerning the lack of recent data inquire into what data are available and if additional data could verify the model's predictions. The groundwater numerical model used available data through 2002 and predicted impacts to 2082.

The USGS currently monitors the water levels for 21 wells in the Basin. The wells are summarized in Table 4.0-3 and the locations of these wells are shown on Figure 7. A useful distinction for monitored wells is the hydrogeologic unit that is represented in the well. As discussed previously, the hydrogeology of the groundwater basin can be represented by two geologic units: the alluvium and the Palm Springs and Imperial formations. The Palm Springs and Imperial formations underlie the alluvium in the area around the USG wells and extend to the ground surface in the north and east portions of the basin.

In the numerical model used for the Draft EIR/EIS, the alluvium was represented as Layer 1 and the Palm Springs and Imperial formations were represented as Layer 2. Because these two units have different hydrologic properties, the current USGS monitoring wells are distinguished according to Layer 1 and Layer 2. In Figure 7, wells screened in Layer 1 are shown in light orange and Layer 2 wells are shown in dark red. Hydrographs for wells in Layer 1 and Layer 2 are shown on Figures 8 and 9, respectively.

Water Level Trends

As shown on Figures 8 and 9, water levels in the both Layer 1 and Layer 2 are generally characterized by little or no fluctuation over time, even though rainfall in the region is flashy both seasonally and annually. Figure 10 illustrates the highly variable annual precipitation, as measured at the California Irrigation Management Information Systems (CIMIS) station in Seeley east of the study area. The lack of water level response to precipitation may reflect a significant lag time between rainfall events and recharge to the water table resulting from the distance from the washes to the monitored wells and in some areas, the significant thickness of the unsaturated (vadose) zone. The result is a fairly constant inflow into the basin from precipitation. This was simulated in the numerical model by using a constant annual rate for recharge into the model.

**Table 4.0-3
Wells Monitored by the USGS Since 2002**

State Well Number	Label	Period of Record		Number of Data Points	Hydrogeology Layer
		Begin	End		
17S 10E 11B1	11B1	Jun-75	Mar-07	60	2
17S 10E 11G1	11G1	Apr-67	Mar-07	67	2
17S 10E 11G4	11G4	Jul-78	Mar-07	54	2
17S 10E 11H3	11H3	Oct-87	Oct-06	39	2
17S 11E 16J1	16J1	May-70	Mar-07	64	2
17S 11E 22E2	22E2	May-75	Mar-07	66	2
16S 10E 27R1	27R1	May-75	Mar-07	66	2
16S 10E 28D1	28D1	Dec-74	Mar-07	11	2
16S 10E 29H1	29H1	May-75	Mar-07	62	2
16S 9E 35M1	35M1	Jul-62	Mar-07	31	2
16S 9E 35N2	35N2	Jun-75	Mar-07	17	2
16S 9E 25M2	25M2	Apr-91	Mar-07	32	1
16S 9E 26F1	26F1	Nov-98	Mar-07	18	1
16S 11E 27F1	27F1	May-75	Mar-07	69	1
16S 10E 31B1	31B1	Sep-93	Mar-07	28	1
16S 10E 32P1	32P1	Oct-92	Mar-07	30	1
16S 9E 34B1	34B1	Mar-98	Mar-07	16	1
16S 9E 36C3	36C3	Jun-75	Oct-06	16	1
16S 9E 36D2	36D2	Jun-75	Mar-07	65	1
16S 9E 36H1	36H1	Mar-54	Mar-07	65	1
16S 11E 42L1	42L1	May-75	Mar-07	52	2

Some comments refer to the rate of water level decline in the basin. In the Draft EIR/EIS two general estimates are given, 1 foot every 5 years and 1 foot every 8 years. To clarify the range of water level declines in the alluvium (Layer 1), the water level data were examined from wells currently monitored by the USGS. For these, the average rate of decline from 1975 to 2007 was calculated at 0.266 feet per year (or 1 foot every 4 years). However, using a single value to describe the water table over the entire basin oversimplifies the issue, because declines are not uniform. The water levels in Layer 1 are chiefly controlled by pumping. Specifically, monitored wells located closer to the pumping wells experience larger and less constant drawdown, for example Well 36H1 shown on Figure 8. This drawdown is most likely the local effect of the pumping well rather than a regional response. The average rate of decline ranges from 0.4 feet per year or 1 foot every 2.5 years (Well 36H1) to 0.13 feet per year or 1 foot every 7.7 years (Well 34B1, not shown). By way of comparison, over the same time period, the numerical model predicts a range of declines from 1 foot every 4.4 years to 1 foot every 8 years.

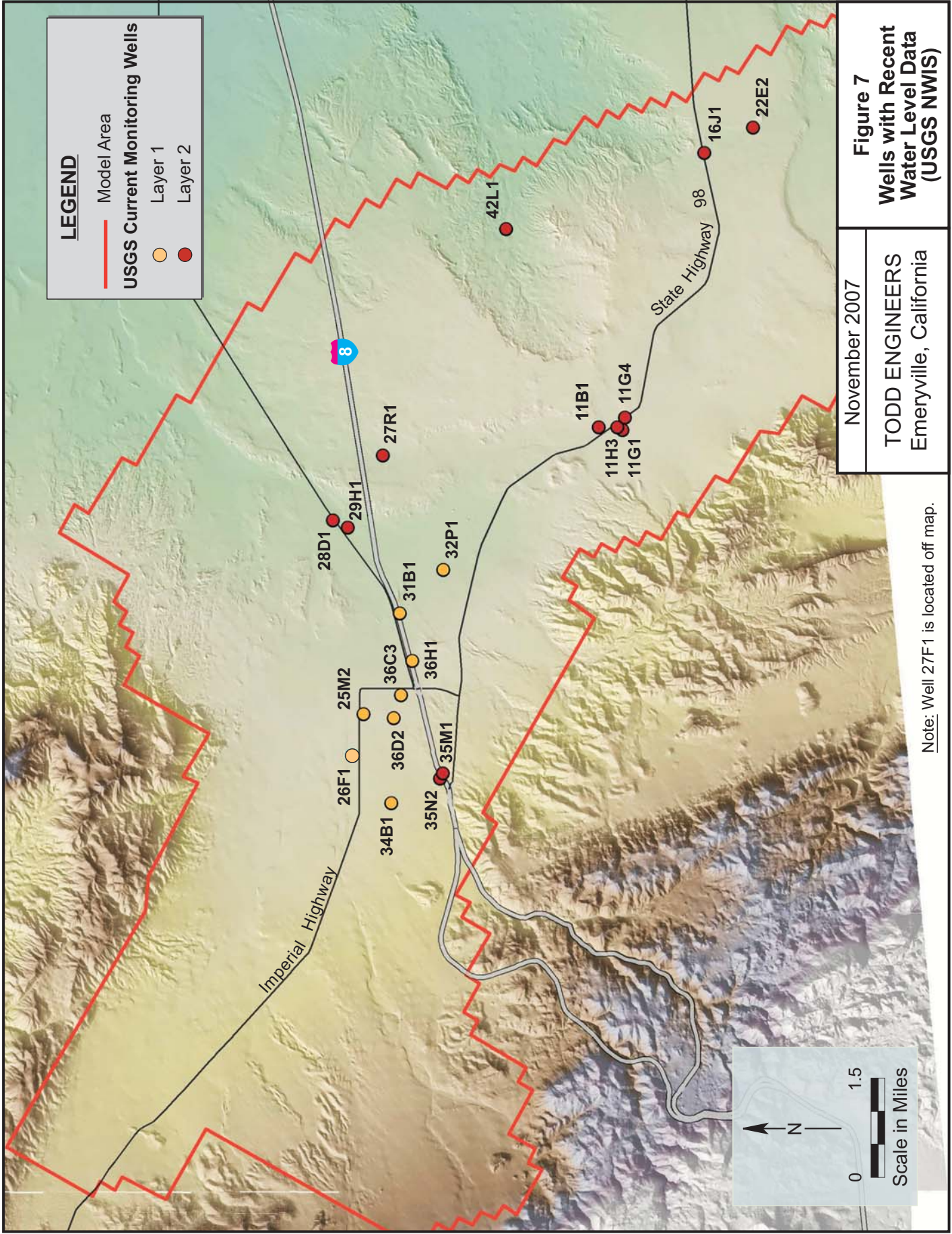
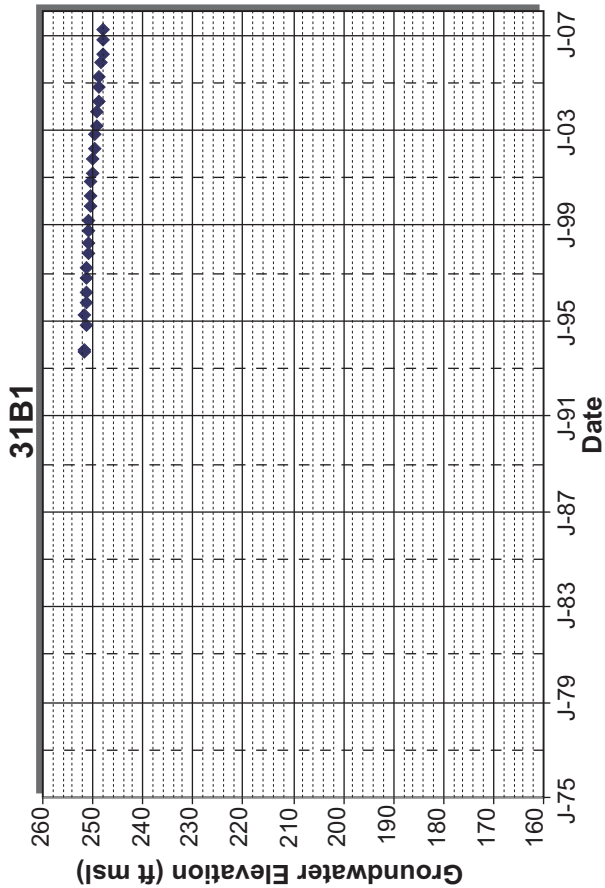
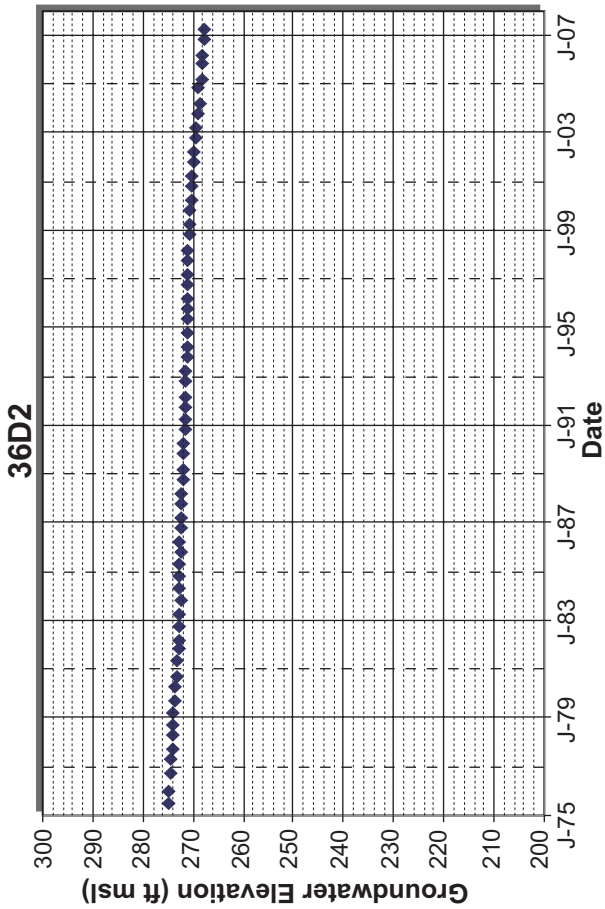
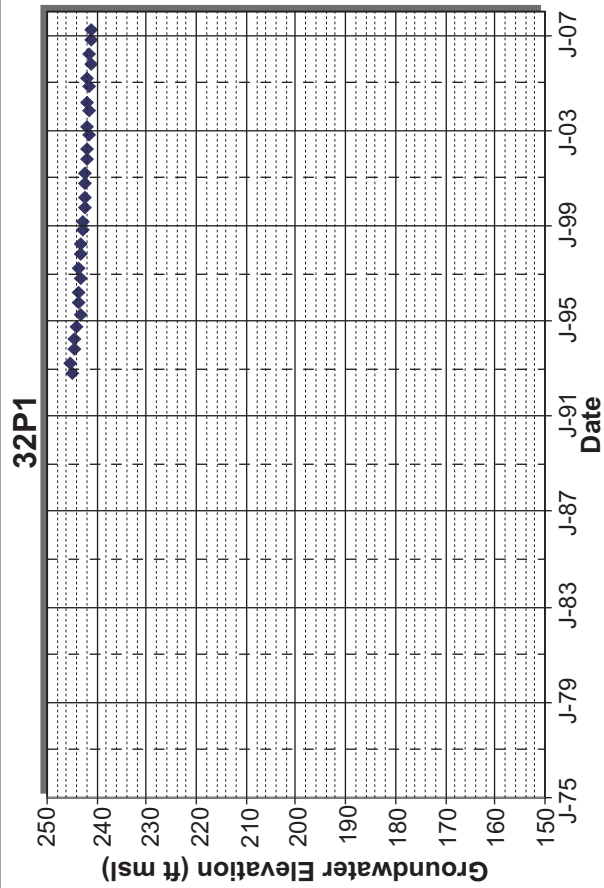
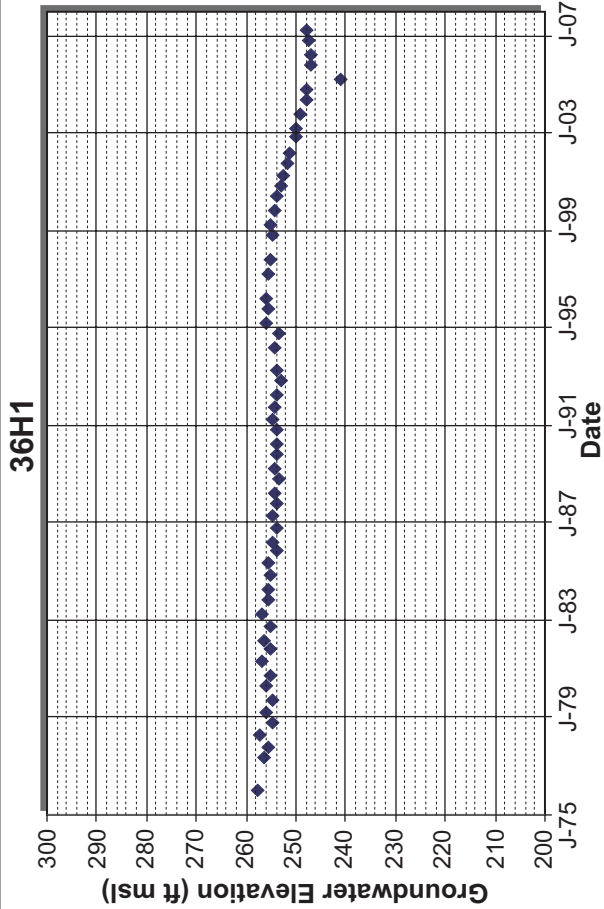


Figure 7
Wells with Recent Water Level Data (USGS NWIS)

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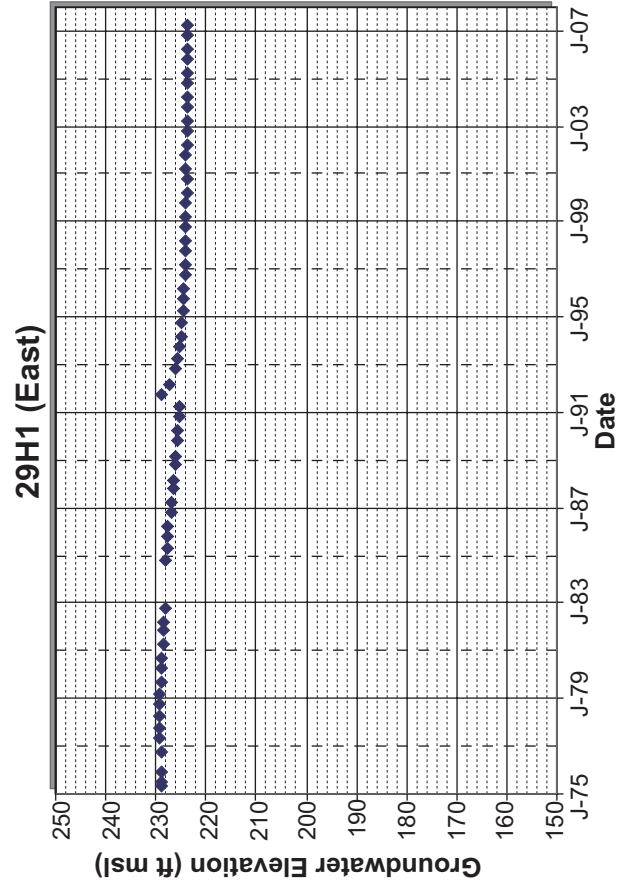
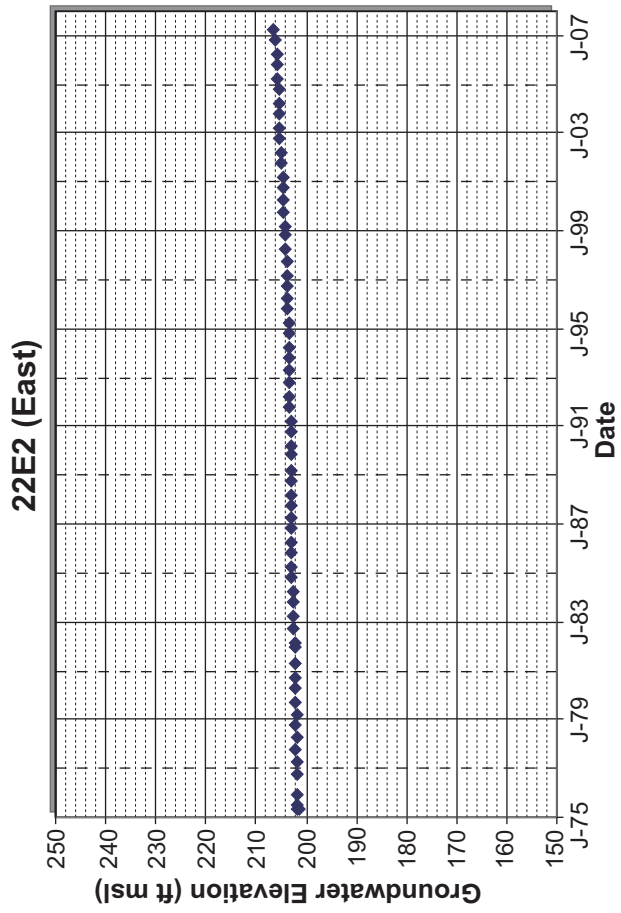
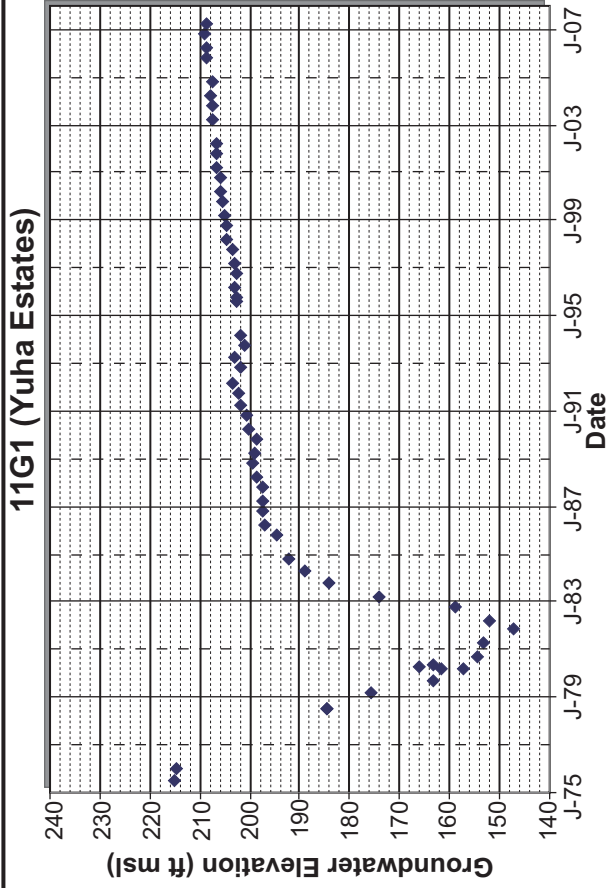
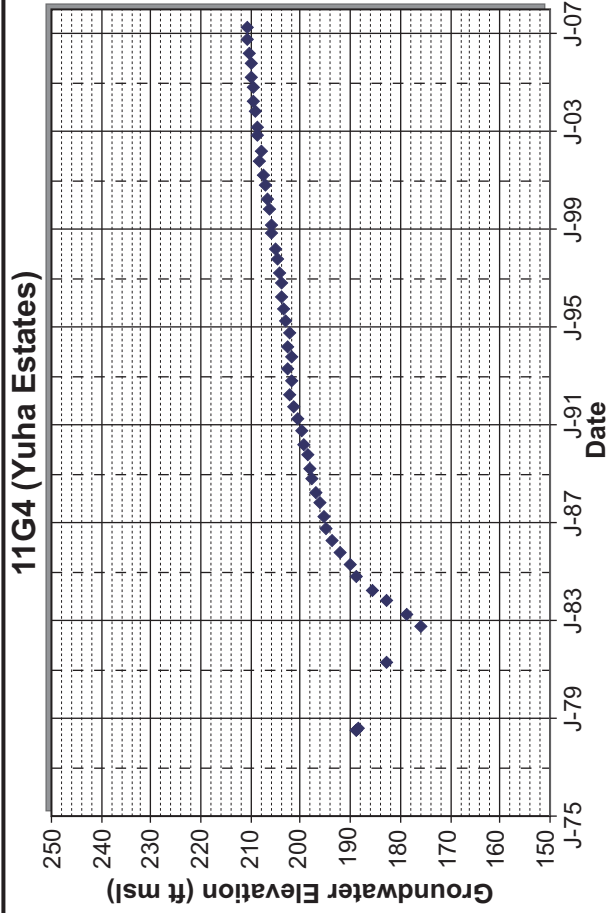
Note: Well 27F1 is located off map.



Source: USGS NWIS.

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Figure 8
 Hydrographs
 Layer 1
 Ocotillo

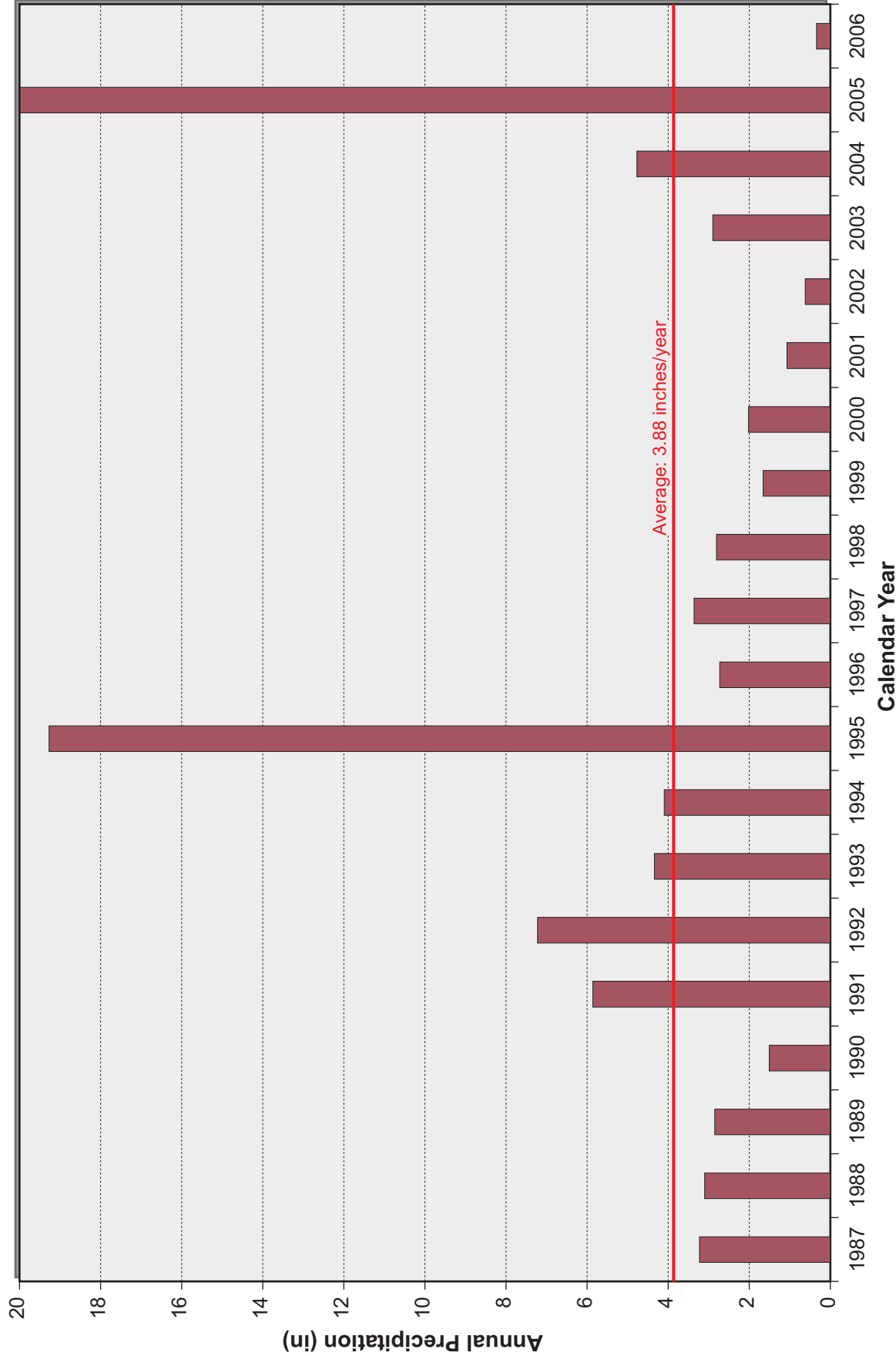


Source: USGS NWIS.

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Figure 9
Hydrographs
Layer 2



Source: CIMIS.

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Figure 10
Annual Precipitation
at Seeley, CA

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Additional comments highlight differences between water levels in individual wells used in the numerical model calibration process. These wells are shown in Figure 11; wells in Layer 1 are shown in white and wells in Layer 2 are shown in dark gray. Specific comments address the difference in water levels between wells 29H1 and 29L1, which are shown on Figure 11 as bracketing the boundary between Layer 1 and Layer 2. This boundary was conceptualized as a fault zone in previous studies, but currently is considered as the contact between the different formations. The different aquifer properties of these hydrogeologic formations (layers) have a significant influence on groundwater levels. As shown in Figure 12, wells in Layer 1 (e.g., 29L1) generally show a greater decline in water levels (due to pumping in Layer 1) while wells in Layer 2 (e.g., 29H1) show a slower decline (Figure 12; see also Figures 8 and 9).

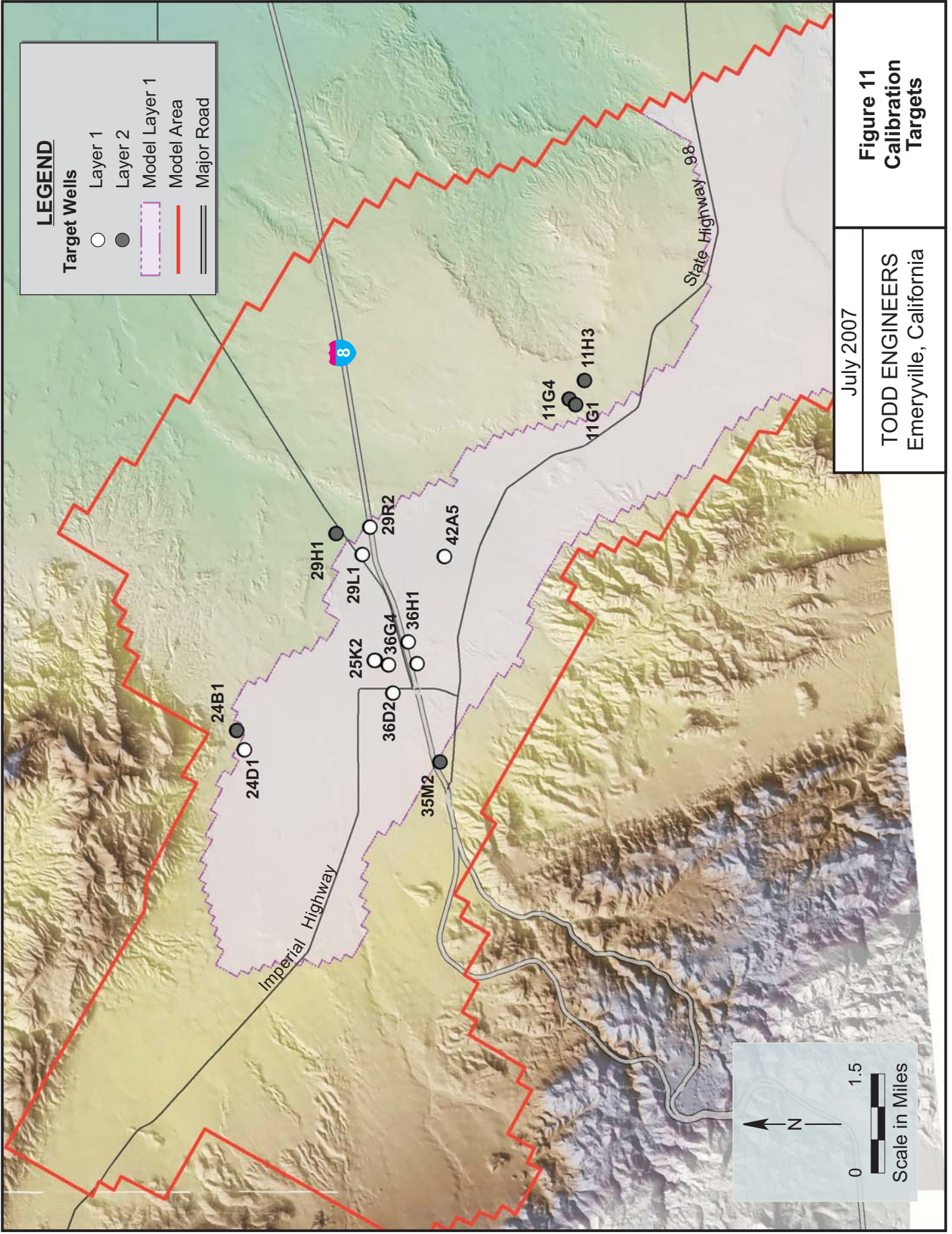
Figure 12 also illustrates the relatively higher groundwater levels in Layer 1 relative to Layer 2 in the Ocotillo area. This indicates a potential downward vertical gradient, with leakage from Layer 1 to Layer 2. However, continuation of the Layer 1 declines theoretically presents the potential for groundwater levels in Layer 1 to decline below groundwater levels in Layer 2. If a reversal in relative groundwater levels were to occur at some point in the future, this would change the direction of vertical groundwater flow from downward to upward. In such case, relatively poor Layer 2 water could potentially migrate upward into Layer 1.

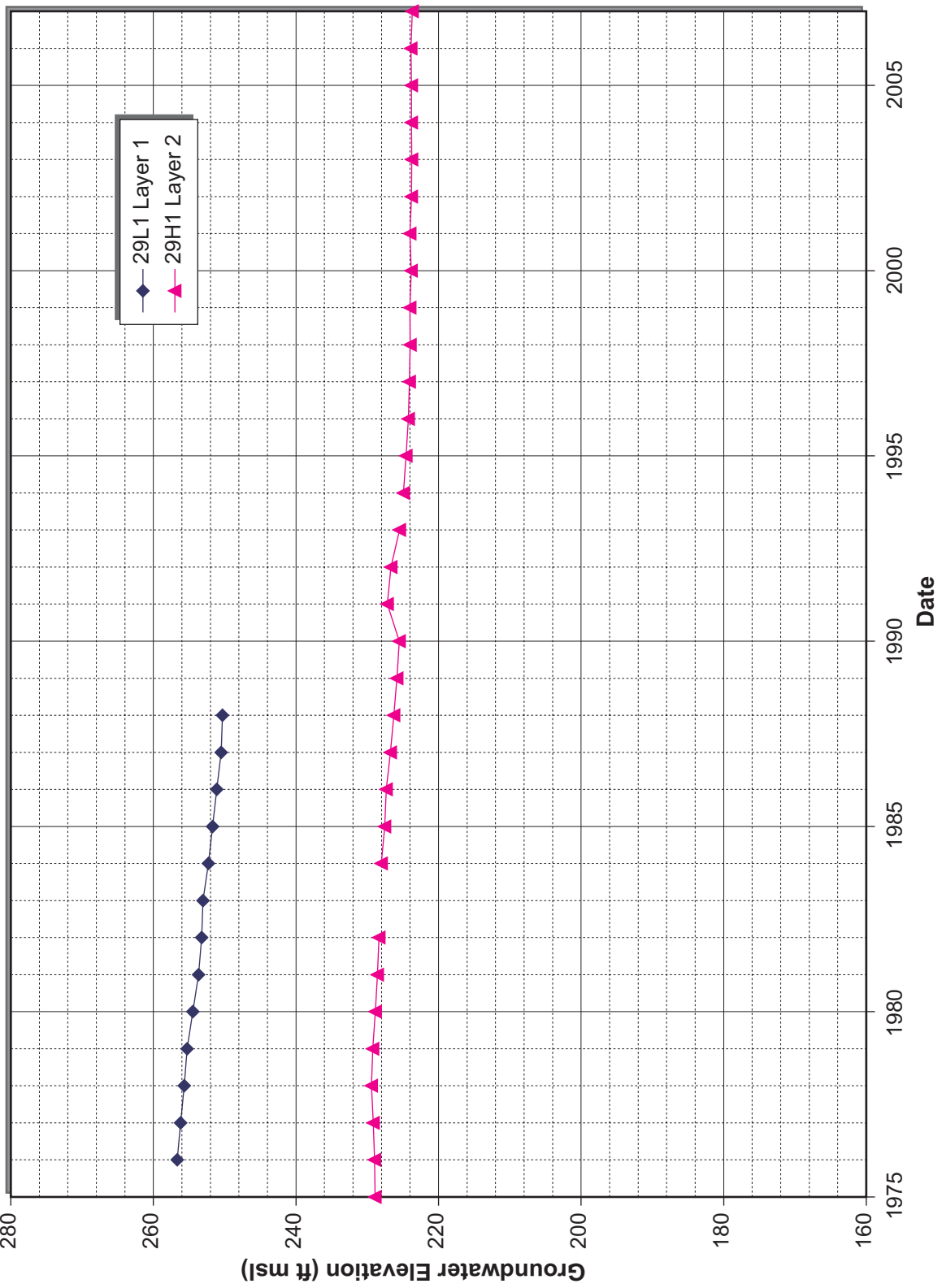
Groundwater Level Responses to Pumping

The differences in hydrologic properties of the two layers, specifically between the Ocotillo and Yuha Estates areas, can also be demonstrated by the two wells pumped for export to Mexico. One well was located in Ocotillo, 25K2 (Layer 1) and the other well was in Yuha Estates 11G4 (Layer 2). Pumping in these wells was increased sharply by 85 AF/Yr and 143 AF/Yr for 25K2 and 11G4 respectively. Water levels in both wells responded quickly with a drawdown of more than 50 feet over 5 years.

In Ocotillo, water levels in nearby wells like Well 25Q1 decreased slightly: 2 feet over the period of pumping. The steep drawdown in Well 25K2 and muted response in nearby wells indicate that the water levels in Well 25K2 reflect the pumping water level and not the static level of the aquifer. In contrast, wells located near the Yuha Estates (Well 11G4) also show a steep drawdown presumably also from localized pumping of wells 11G1 and 11H4.

In addition, the recovery of water levels in these two areas highlights the hydrogeologic differences. Water levels in Ocotillo Well 25K2, recovered quickly after pumping was suspended; specifically, water levels recovered over 50 feet in less than 2 years.





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Figure 12
 Water Levels
 in Wells
 29L1 and 29H1

However, water levels in Well 11G4 near Yuha Estates have recovered much more slowly and still (30 years later) have not reached pre-pumping levels.

In summary, the alluvial aquifer near Ocotillo is considerably more permeable than the older Palm Springs and Imperial formations in Yuha Estates. Accordingly, drawdown impacts due to pumping in the alluvial aquifer (e.g., near Ocotillo) are more localized and recover much faster than comparable drawdown impacts in the older formations near Yuha Estates.

Recent Water Level Data

In general, groundwater levels from 2002 to 2006 maintained the same trends observed in previous years. Wells screened in Layer 1 continue to decrease at the same rate as 1975 to 2002. Well 36H1, located close to USG pumping, exhibited a steep decline of approximately 10 feet from 1995 to 2005, but has recently begun to recover. The past decline may be the result of localized pumping rather than a regional occurrence, as the trend is not shown in any other nearby wells. Wells screened in Layer 2 in general show steady to increasing groundwater levels. Wells located in the Yuha Estates area (e.g., Well 11G1) continue to recover from the intense groundwater pumping in the early 1980's for export to Mexico.

The water levels predicted by the model generally track with the long term trends of regional water levels. The difference between the recent observed data and the model predicted water levels is similar to the differences shown during calibration. Although the additional data is valuable to confirm the continuation of regional trends, it provides no new information to adjust the conceptual model of the basin.

Summary

The current hydrogeologic conceptual model of the Basin provides an improved explanation of the significant differences in hydrogeologic properties, water levels, and water quality between the area near Ocotillo and the area to the east, and between Ocotillo and Yuha Estates. In brief, the alluvial Layer 1 aquifer near Ocotillo is generally characterized by greater permeability, better water quality, and more rapid recovery from pumping. The less permeable Layer 2 (Palm Springs and Imperial formations) east of Ocotillo and in the Yuha Estates area is characterized by relatively poor water quality and greater, more persistent impacts from pumping. In the Ocotillo area, groundwater levels in Layer 1 are higher than those in Layer 2. However, continued groundwater level declines in Layer 1—at more rapid rates than those in Layer 2—present the potential for reversal of that vertical gradient. In that case, relatively poor groundwater from Layer 2 could migrate into Layer 1, resulting in water quality deterioration in

Layer 1. See Subsections 4.3.7 and 4.3.8 for additional discussion of groundwater level trends and potential water quality impacts. The current hydrogeologic conceptual model supports the conclusions of the Draft EIR/EIS regarding the potential significant effects of the Proposed Action.

4.3.7 Water Balance

Many comments refer to the water balance of the Basin and how it was applied in the revised numerical groundwater model of the Basin (Bookman-Edmonston 2004). Specific concerns have been raised regarding the amount and distribution of recharge, the flow across the U.S./Mexico border, and historical pumping in the Basin.

The water balance for a groundwater basin examines the inflows and outflows of the groundwater system and change in groundwater storage (inflow - outflow = change in storage). Developing a water balance is fundamental to the conceptual model and helps quantify the understanding of the basin systems. Comments address the need to compare the current model's water balance to previous studies. These studies can provide a range of reasonable estimates and illustrate the level of uncertainty in the water balance.

Table 4.0-4 shows the estimated water balances for four previous studies as well as the numerical model used to predict impacts in the Draft EIR/EIS. The previous studies include USGS Water Resources Investigation (WRI) 77-30 by J. A. Skrivan (1977), a master's thesis by David Mark (1987), an unpublished report prepared by D. Huntley (1979), and the previous numerical model prepared by Bookman-Edmonston (1996). The water balance presented in the Draft EIR/EIS reflects the calibrated results of the 2004 Bookman-Edmonston model.

The main inflow into the Basin is recharge of runoff from precipitation in the surrounding watersheds. The main outflows include pumping (USG and others), subsurface outflows (across the U.S./Mexico border, across faults, and to the east), and losses from evapotranspiration (ET). Although the water balance estimates represent a range of values for recharge and outflow, all studies show a declining change in storage over the past 30 years. While the inflow (recharge) and subsurface outflow values in the 2004 revised numerical model are lower than previous estimates, the 2004 revised numerical model reflects a similar change in storage as the previous estimates, a decline of approximately 500 AF/Yr. The water balance components are discussed below.

Inflow

As shown in Table 4.0-4, estimates of inflow into the Basin range from 1,077 to 2,631 AF/Yr. In the Skrivan 1977 study, the total recharge to the Basin was estimated using the methodology based on USGS Professional Paper 486-B (Hely and Peck 1964). This methodology results in an estimate of annual runoff from the mountains in the area ranging from 0.02 inches to 0.50 inches per year. Skrivan estimated the total recharge to the Basin as equal to 0.22 inches per year over the drainage area of 225 square miles. The total estimated recharge was 2,600 AF/Yr. This represents less than 5 percent of precipitation. The 1996 Bookman-Edmonston report used the same method with the same result.

However, Huntley (1979) and Mark (1987) both concluded this methodology was too simplistic and used different estimates. Mark estimated recharge from precipitation using three different methods: rainfall-runoff curve, runoff-area correlation, and the Maxey-Eakin method. Using these methods, his estimates ranged from 536 AF/Yr (rainfall-runoff) to 1,650 AF/Yr (Maxey-Eakin). Mark concluded that the Maxey-Eakin method was the most reliable to predict areal recharge based on available data. An additional 10 percent of recharge (170 AF/Yr) was added to the water balance as groundwater inflow, but no explanation was included in the report.

The watershed areas defined by Mark (1987) and Huntley (1979) were a fraction of the size (40 square miles as compared to 225 square miles) as that used by Skrivan (1977). The isohyetal map used in Mark's recharge analysis was not presented in his thesis. However, a table was included that equated an elevation with an isohyetal contour. Based on this table and others included in the report, the percent of precipitation percolating the groundwater aquifer was approximately 6 percent, slightly higher than Skrivan's estimate of 5 percent. However, comparison of the documented isohyets/elevations with the isohyetal map produced by PRISM² indicates the total precipitation may have been overestimated and the percentage of precipitation recharging the Basin may be higher than 6 percent.

Huntley (1979) did not prepare an independent estimate for recharge; instead he calculated the total inflow as the unknown water balance equation (outflow – change in storage = inflow). The resulting estimate, 2,631 AF/Yr, was similar to Skrivan's (1977) estimate 2,600 AF/Yr. This similarity is mostly likely due to the fact that the other

² PRISM (Parameter-elevation Regressions on Independent Slopes Model) isohyetal maps produced by the University of Oregon: Daly, Chris and George Taylor, *California Average Monthly or Annual Precipitation, 1961-90*, Water and Climate Center of the Natural Resources Conservation Service, Portland, Oregon, 1998.

Table 4.0-4
Comparison of Previous Water Balances

All Units in AFY (annual average)	USGS(Skrivan) 1977		Huntley 1979	Mark 1988	Bookman-Edmonston 1996		2004
	1925	1975	1976-1978	1976	1976	1995	2002
Study Period							
Watershed Area	225 mi ²		40 mi ²	40 mi ²	225 mi ²		76 mi ²
Inflows							
Total Inflow	2,600	2,600	2,631	1,820	2,600	2,600	1,077
<i>Infiltration of Precipitation</i>	2,600	2,600		1,650	2,600	2,600	1,077
<i>Subsurface Inflow</i>				170			
TOTAL INFLOWS	2,600	2,600	2,631	1,820	2,600	2,600	1,077
Outflows							
Total Pumping	0	900	924	1,002	711	511	556
<i>USG Pumping</i>		600			413	400	434
<i>Urban Use</i>		300			85	111	122
<i>Export to Mexico</i>					213	0	
Total Groundwater Outflow	1,950	1,900	1,999	825	1,900	1,900	990
<i>Underflow to Mexico</i>	1,500	1,450	1,245		1,450	1,450	515
<i>Underflow across Faults</i>	450	450	754		450	450	
<i>Underflow to East</i>							475
ET Outflow	650	300	250		250	250	
TOTAL OUTFLOWS	2,600	3,100	3,173	1,827	2,861	2,661	1,546
Change in Storage	0	-500	-542	-7	-261	-61	-469

elements of the water balance (outflow and change in storage) were estimated with the same methodology and the same data used in the Skrivan (1977) report.

Bookman-Edmonston's (2004) current numerical model's estimate of average annual recharge, 1,077 AF/Yr is lower than previous estimates. For the 2004 study, the contributing watershed for the washes in the area was estimated to be 76 square miles, within the range of previous estimates. The specific drainage areas and the average precipitation are not described in the report. However, based on the locations of the washes, the amount of contributing area documented in the report, and an isohyetal map from PRISM, the average rainfall for the tributary areas is approximately 5 inches per year (20,266 AF/Yr over the watershed). Accordingly the estimated recharge (1,077 AF/Yr) is about 5 percent of total recharge, the same relationship Skrivan used in the WRI 77-30.

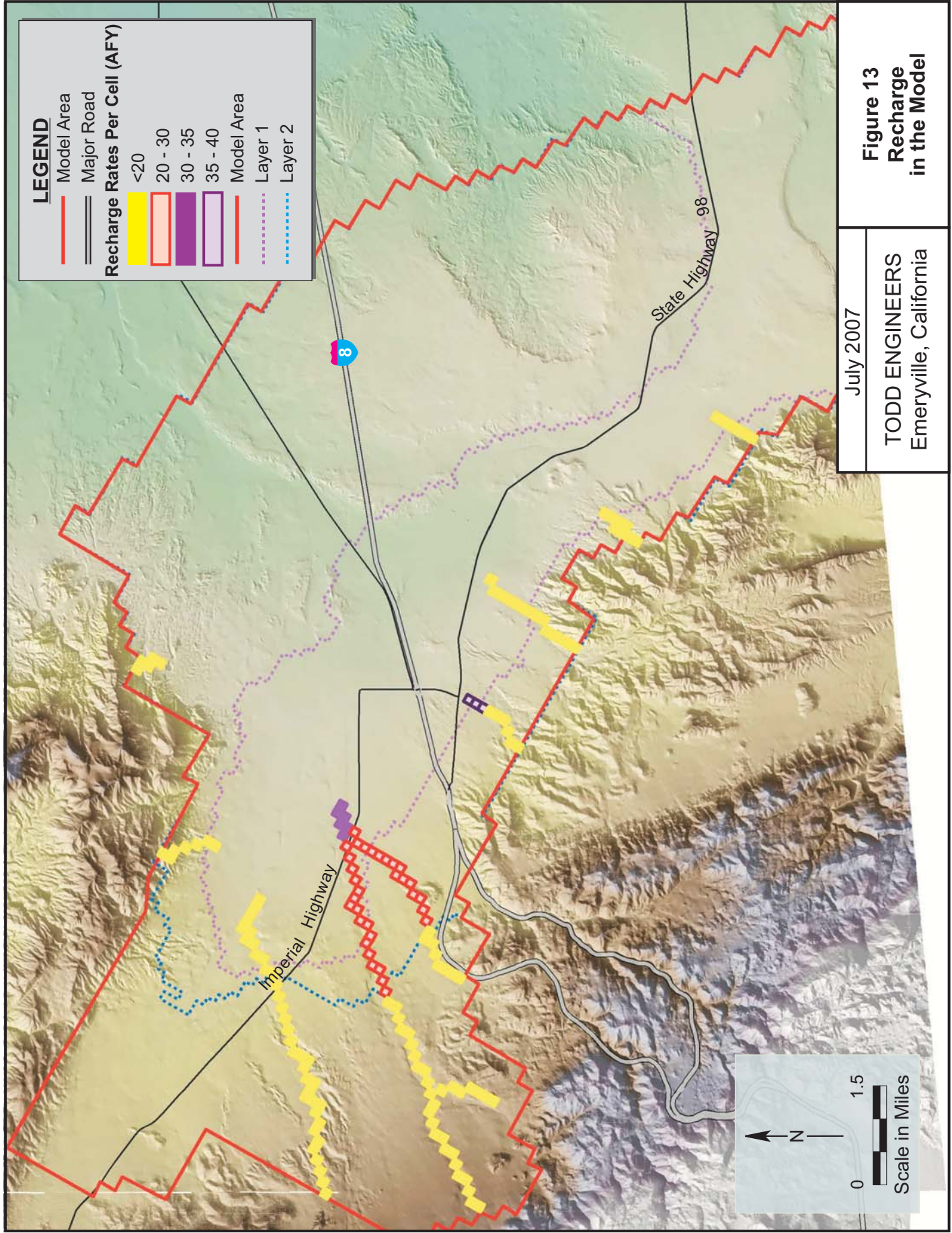
In the current numerical model, recharge remains constant over the study period, reflecting an annual average. An average was used rather than annual data as the lag time between precipitation and recharge is unknown.

With regard to areal distribution of recharge, the recharge was applied to the model as infiltration along local washes. The locations and rate of recharge determined by the model calibration is shown on Figure 13. Recharge was applied over 163 cells (1,630 acres) or approximately 2 percent of the active model area. Approximately 65 of these recharge cells become dry over the study period and no longer contribute to the total inflow of the model. As shown in Figure 13, recharge was set up to apply to both Layers 1 and 2 as Layer 2 extends to the ground surface in some locations. However, the MODFLOW model was configured to apply recharge only to Layer 1 rather than to the highest active layer. Therefore, no direct recharge was applied to Layer 2. This is a reason why the model underestimates total recharge to the groundwater basin.

Subsurface Outflow

The subsurface outflow from the Basin is highly uncertain because of lack of data. Although the U.S./Mexico border has been used as a basin boundary in all previous studies, it is a political not a hydrologic boundary. Limited water level data in the area make estimates of the flow across the boundary difficult.

Skrivan (1977) estimated underflow to Mexico and flow eastward from the calibrated model results, finding a total outflow of 1,900 AF/Yr. A decrease in underflow across the U.S./Mexico border was simulated between the 1925 and 1975 scenarios due to a decrease in water levels. Mark (1987) estimated a total subsurface outflow of 825 AF/Yr



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Figure 13
Recharge
in the Model

but provided no discussion on how this value was determined. The estimate may have been the result of model calibration. Huntley (1979) estimated total subsurface outflow using the hydrologic properties presented by Skrivan (1977) for the upper sediments and Loeltz et al. (1975) for the lower sedimentary rocks. The exact methodology is not detailed in the report but it is assumed that the calculation used Darcy's equation for groundwater flow. The resulting estimate was 1,999 AF/Yr, similar to Skrivan's model calibrated estimate. The 1996 Bookman-Edmonston report reviewed both Skrivan's (1977) and Huntley's (1979) outflow estimates and concluded the results were reasonable. For the 1996 Bookman-Edmonston water balance, Skrivan's (1977) estimate was used.

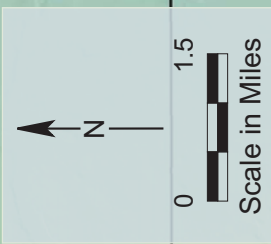
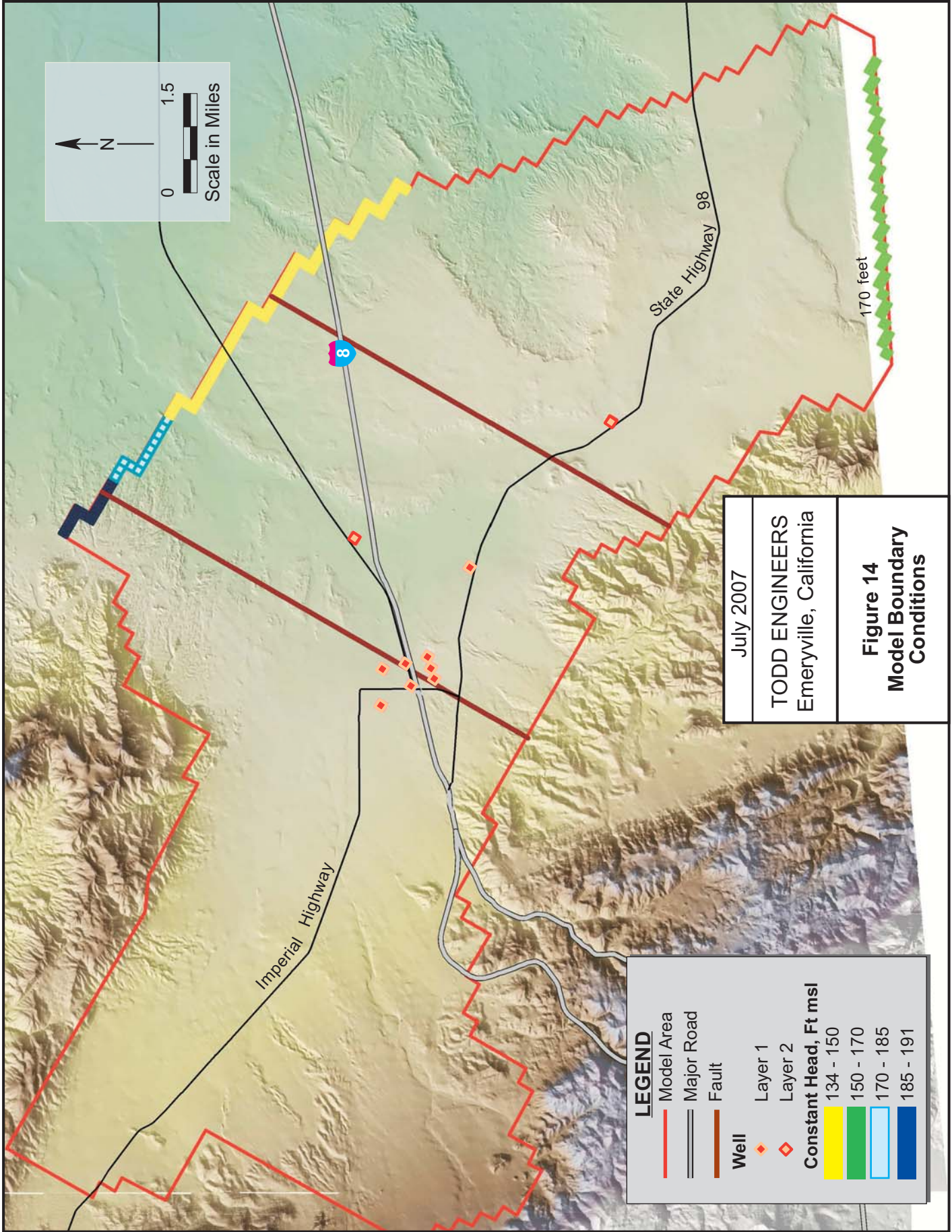
The 2004 Bookman-Edmonston model used in the Draft EIR/EIS used the model calibrated results to determine total outflow. The result was a smaller outflow, 990 AF/Yr, than all previous estimates. However, the total inflow from recharge was also lower than previous estimates. The net result is a similar change in storage.

To simulate the subsurface outflow along the northern and southeastern boundaries of the model, constant head cells were used. Constant heads cells assume that the groundwater level just outside the model area is known and remains at a constant elevation. The model calculates the amount of flow into or out of the model based on the difference between this fixed water level and the calculated water level just inside the model. The value of the constant heads were based on available pre-development water levels (1925) and adjusted during calibration. These values ranged from 135 feet above mean sea level (msl) to 191 feet msl and are shown on Figure 14.

Pumping

Another major concern addressed by the comments is the estimation of Basin pumping. Pumping in the model occurs in 10 locations (cells), with eight in Layer 1 and two in Layer 2. These wells are shown on Figure 14. The wells in Layer 1 include Ocotillo, Ocotillo Mutual, Westwind, Nomirage, Coyote, and USG wells 4, 5, and 6. The wells in Layer 2 include Yuha Estates and West Texas. Total Basin pumping in the model is shown in Figure 15 for the baseline conditions.

Several comments addressed the difficulties in estimating historical pumping and impact that this uncertainty would have on the model. In the WRI 77-30 report, Skrivan (1977) estimated pumping as of 1925 and 1975. Prior to 1925, pumping was assumed to be negligible. Pumping from 1925 through 1975 was determined through review of



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Figure 14
Model Boundary
Conditions

LEGEND

- Model Area
- Major Road
- Fault
- Well
- Layer 1
- Layer 2

Constant Head, Ft msl

- 134 - 150
- 150 - 170
- 170 - 185
- 185 - 191

170 feet

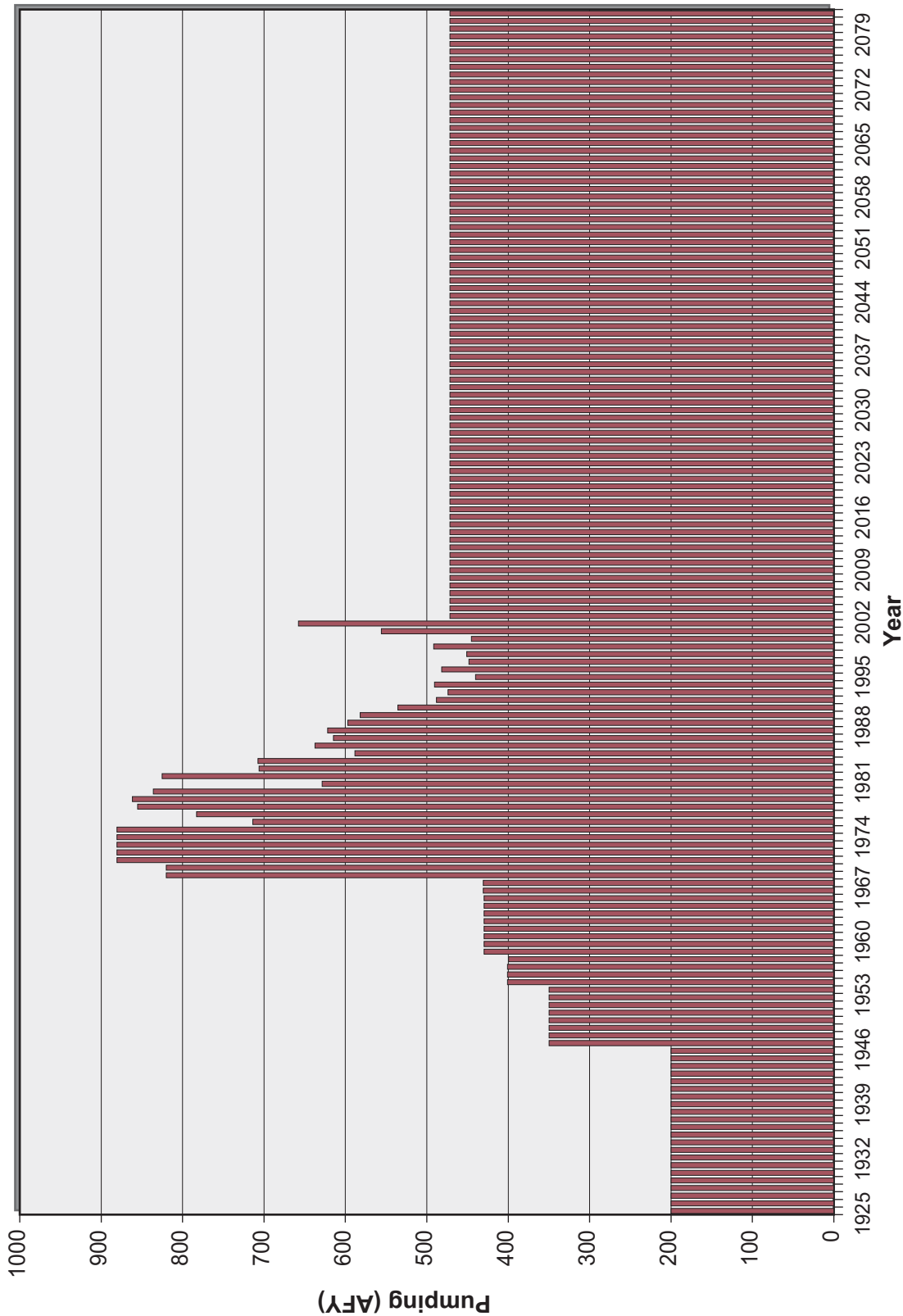


Figure 15
 Total Basin Pumping
 in the 2004 Numerical
 Model - Baseline

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various reports that described wells in the Coyote Wells area and their uses. These included a railroad, store and post office, Ocotillo Mutual Water Company, private domestic users and the Portland Cement Company, which was purchased by USG in 1946. Data received from USG were also reviewed. The total pumping in 1975 was estimated at 880 AF/Yr. The larger producers included USG (600 AF/Yr), Clifford Well, Coyote Valley Mutual Water Company, and Ocotillo Mutual Water Company. USG has estimated pumping for 1970 through 1980 based on wallboard production at about 400 AF/Yr or two-thirds the USGS estimate. USG and its consultants could not reconcile the difference between USGS and USG estimates. This may be due to the changing water use in wallboard production; the amount of water needed in production has changed over the years as USG improves its water use efficiency.

For the water balance described in the Draft EIR/EIS, it is recognized that pumping rates before 1981 are estimates and that these historical pumping estimates were used to assist in calibration of the model. Specifically, in the 2004 Bookman-Edmonston model, Skrivan's (1977) estimates were used for 1925 through 1975, USG estimates were used for 1976 through 1980, and measured pumping data for USG wells were used for 1981 through 2002. The numerical model then predicts water levels for 2002 through 2082. While the model was simulated from 1925 through 2082, the main objective of the model is to simulate the impact of the proposed Project on groundwater levels from the present into the future. From this perspective, it is important that actual USG pumping data are available from 1981 to the present.

Summary

As documented in Table 4.0-4, water balances have been prepared for four previous studies as well as the numerical model used to predict impacts in the Draft EIR/EIS. While all the studies are not necessarily independent, they represent a variety of methodologies, data sets, study periods, and study areas. The resulting inflow (recharge) values range from 1,077 to 2,631 AF/Yr, with the numerical model and Draft EIR/EIS using the lowest recharge value. While outflow values are the subject of discussion and some uncertainty, the outflows range from 1,546 to 3,173 AF/Yr, with the lowest value representing recent conditions and including measured pumping data for the major pumper (USG).

Referring to the bottom line in Table 4.0-4, all of the water balances representing conditions over the past 30 years indicate a negative change in storage. This finding is consistent with the sustained groundwater level declines documented in the groundwater Basin. This finding also raises the issue of groundwater overdraft.

The Draft EIR/EIS acknowledges that the USGS has been collecting groundwater data from the Basin since the 1970s in response to concerns regarding potential overdraft.

Overdraft is defined below by the California Department of Water Resources (DWR) Bulletin 118, *California's Groundwater*:

Groundwater overdraft is defined as the condition of a groundwater basin or subbasin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years, during which the water supply conditions approximate average conditions. Overdraft can be characterized by groundwater levels that decline over a period of years and never fully recover, even in wet years.

Application of the above definition to the Basin indicates that the amount of pumping withdrawal (e.g., 2002 value of 556 AF/Yr from Table 4.0-4) is *less* than the amount of recharge (e.g., 1,077 AF/Yr). However, the sustained declines show that the existing wells do not effectively capture the available recharge and instead, depend in part upon groundwater storage. Subsurface discharge (underflow) also occurs, primarily across the southern boundary into Mexico and along the eastern boundary. The condition of overdraft is characterized in the Basin by sustained groundwater level declines over the past 30 years and by the water balance studies, all of which indicate a negative change in storage.

The decline in storage is gradual and small relative to the overall storage in the Basin; nonetheless, the decline in storage itself is an adverse impact, representing depletion of a shared resource. This groundwater resource is used beneficially for both industrial supply (USG) and as the sole source of municipal and domestic supply. A condition of overdraft undercuts the long-term reliability of that supply. For Impact 3.3-2, Water Depletion at Plant Affecting the Groundwater Basin, the finding of a significant and unavoidable impact on the Basin acknowledges the condition of overdraft and the fact that the proposed Project's increased pumping would increase the overdraft over the next 80 years.

4.3.8 Application of the Numerical Model

Introduction

Several comments refer to the capability of the numerical groundwater model to adequately simulate groundwater flow in the Basin. This section provides a summary of

the model setup and calibration followed by an evaluation of the capability of the model to simulate groundwater conditions relevant to the Draft EIR/EIS.

Model Setup

The numerical groundwater model (based on the widely used MODFLOW software) went through a major update and revision for the 2004 report (Bookman-Edmonston 2004) compared to the 1996 report (Bookman-Edmonston 1996). The primary revision to the numerical model was to incorporate the revised geologic interpretation (see Subsection 4.3.6 and 4.3.7). The primary components of the revised geologic interpretation include:

- Identification that the groundwater basin is composed of two layers, an upper alluvial layer and a lower layer composed on the Palm Springs and Imperial formations.
- No Elsinore – Laguna Salada fault extension is present in the groundwater basin that forms a significant hydrologic barrier to groundwater flow.
- Variations in transmissivity and water quality are a result of the two different formation plus variations in the thickness of the alluvial aquifer and depth to the top of the lower aquifer.

The model-simulated water balance (see Subsection 4.3.7) is one of the primary modeling results of interest for the Draft EIR/EIS. A review of the model setup shows that the only significant source of groundwater recharge to the model is from stream runoff along the local washes. The model assumes uniform stream recharge throughout the model run. The model setup also specifies that recharge only applies to Layer 1 and not to Layer 2. Because large portions of Layer 1 become inactive during the model simulation due to water levels below the Layer 1 bottom elevation, groundwater recharge is restricted to the center of the Basin. Furthermore, this setup means that the only recharge to Layer 2 is seepage from Layer 1. Consequently, this model setup causes the model to under-represent the total groundwater recharge to the Basin.

The groundwater outflow in the model is represented by subsurface flow through portions of the northeastern and southern boundaries and from groundwater pumping by wells. The subsurface outflow boundaries are simulated using a constant head boundary condition. The head values for these locations are set as steady-state values that do not change over time. The value of the constant heads were based on available pre-development water levels (1925) and adjusted during calibration. These values ranged from 135 feet msl to 191 feet above msl and are shown on Figure 14.

Pumping for 10 cells is included in the model to represent current and future pumping. See Subsection 4.3.7 for discussion of estimates of historical USG pumping; for communities in the area, pumping is based on estimated per capita water usage. For the future scenarios, the non-USG groundwater usage is based on extrapolated population projections based on population growth of 1.4 percent from 1980 to 1990.

Groundwater outflows in Layer 1 are through pumping wells, groundwater outflows through the southern boundary along the U.S./Mexico border, and leakage to Layer 2. Groundwater outflows from Layer 2 primarily consist of subsurface outflows through the northeastern and southern boundaries. Only minor groundwater pumping is included in Layer 2.

Model Calibration

The groundwater model was calibrated to measured groundwater levels for 15 wells in the Basin. Of these calibration wells, nine wells represent Layer 1 and six wells represent Layer 2. The model calibration consisted of comparing simulated to observed groundwater levels. A statistical evaluation of the model results produces the following statistical parameters provided in Table 4.0-5.

**Table 4.0-5
Summary of Model Calibration Statistics**

Statistical Measure	Layer 1 Calibration Wells	Layer 2 Calibration Wells
Number of Wells	9	6
Number of Observations	185	134
Mean Error	2.2	9
Root Mean Square Error	5.6	16.5
Standard Deviation	5.2	13.9

The observed groundwater levels used for model calibration are averages of the two measurements collected for each year. Averages were used because the model stress periods are 1 year in length, so the model does not have the capability to evaluate seasonal changes. In most cases, the annual variation in water levels is minor with seasonal variations of less than 1 foot.

It should be noted that some degree of difference or residual between the observed and simulated groundwater elevations is expected. Residuals may be due in part to localized effects or data quality issues. For example, residuals can result from using groundwater elevations from pumping wells as calibration targets. MODFLOW also

does not take into account the impact of well efficiency on groundwater elevations at pumping wells. In addition, the timing of the observed groundwater elevations does not exactly match the model stress periods.

The water levels in Well 25K2 have an atypical response to pumping compared to the other Layer 1 wells. Water levels in Well 25K2 may represent pumping water levels that can be significantly lower than those representing regional aquifer conditions. Most of the Layer 1 statistical error is generated from this one well. Removing initial Well 25K2 data would reduce the mean error to 1.5 and the standard deviation to 3.5 for Layer 1.

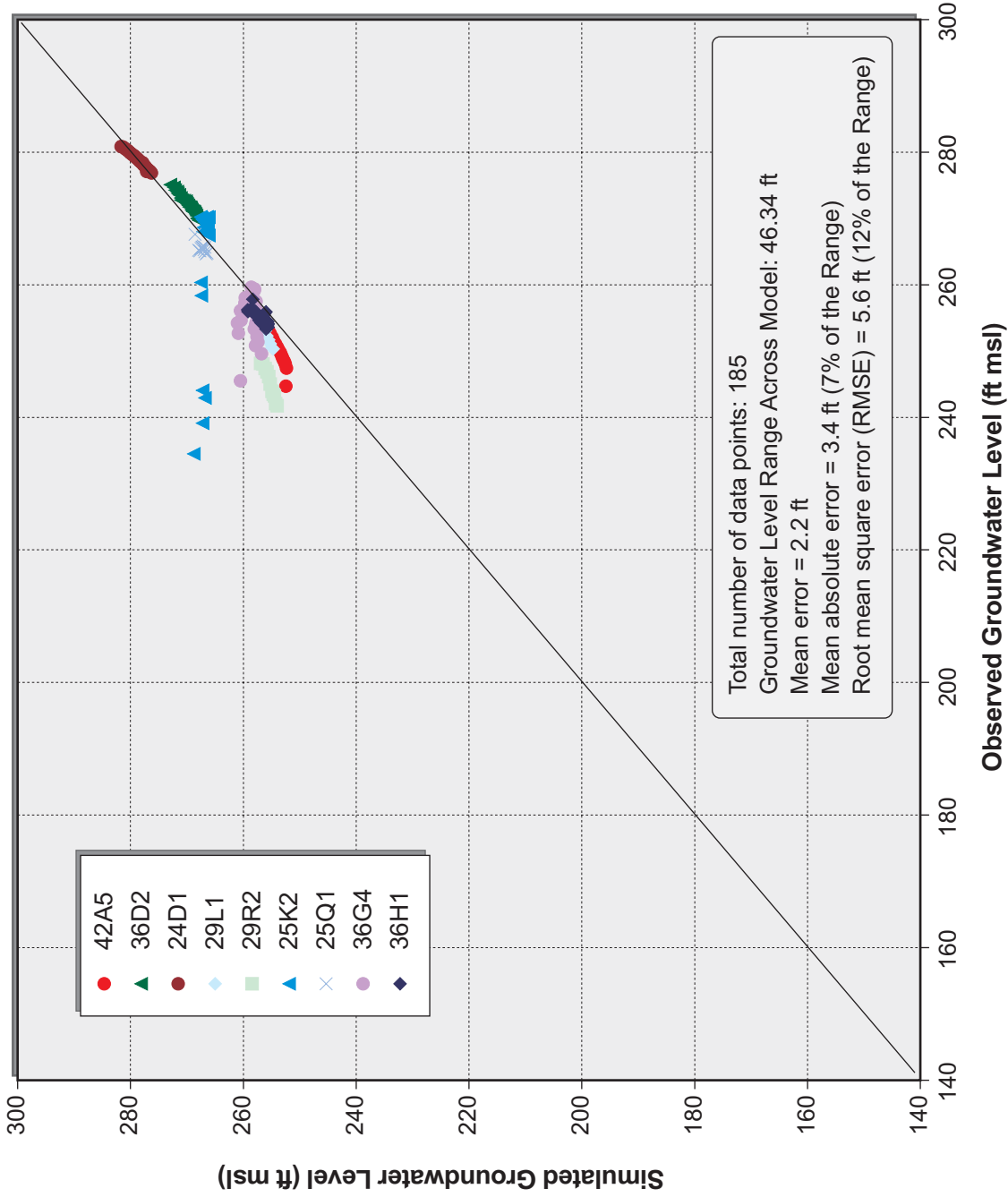
Equally important is evaluating whether the model is representing the appropriate trend or response to stresses (e.g., pumping) in the aquifer. Matching these trends is important to demonstrate that the model has the capability to simulate historical changes in groundwater elevations, and is therefore capable of forecasting future changes in groundwater elevations.

The nine calibration wells completed in Layer 1 are all clustered in the central portion of the Basin near Ocotillo. Figure 16 shows the comparison of simulated to observed groundwater levels for the Layer 1 wells. These results show that in general the calibration points tend to parallel the 1:1 comparison line. This indicates that the relative change in response to pumping is represented by the groundwater model. Water levels from wells 24D1, 36D2, 36H1 and 25Q1 show very close matches to the observed values. Water levels from wells 42A5, 29L1, and 29R2 show a reasonable match; however, the simulated water levels show a slight divergent trend by becoming progressively higher than the observed water levels over time.

The six calibration wells completed in Layer 2 are located in various locations in the Basin. The calibration results for Layer 2 are more problematic. The trends show more significant variations between the simulated and observed groundwater levels (Figure 17). The Yuha Estates wells (11G1, 11G4 and 11H3) in particular show variations in both magnitude and trend. Wells 29H1, 24B1 and 36M1 show better agreement with the trend, but vary in magnitude by about 5 to 10 feet.

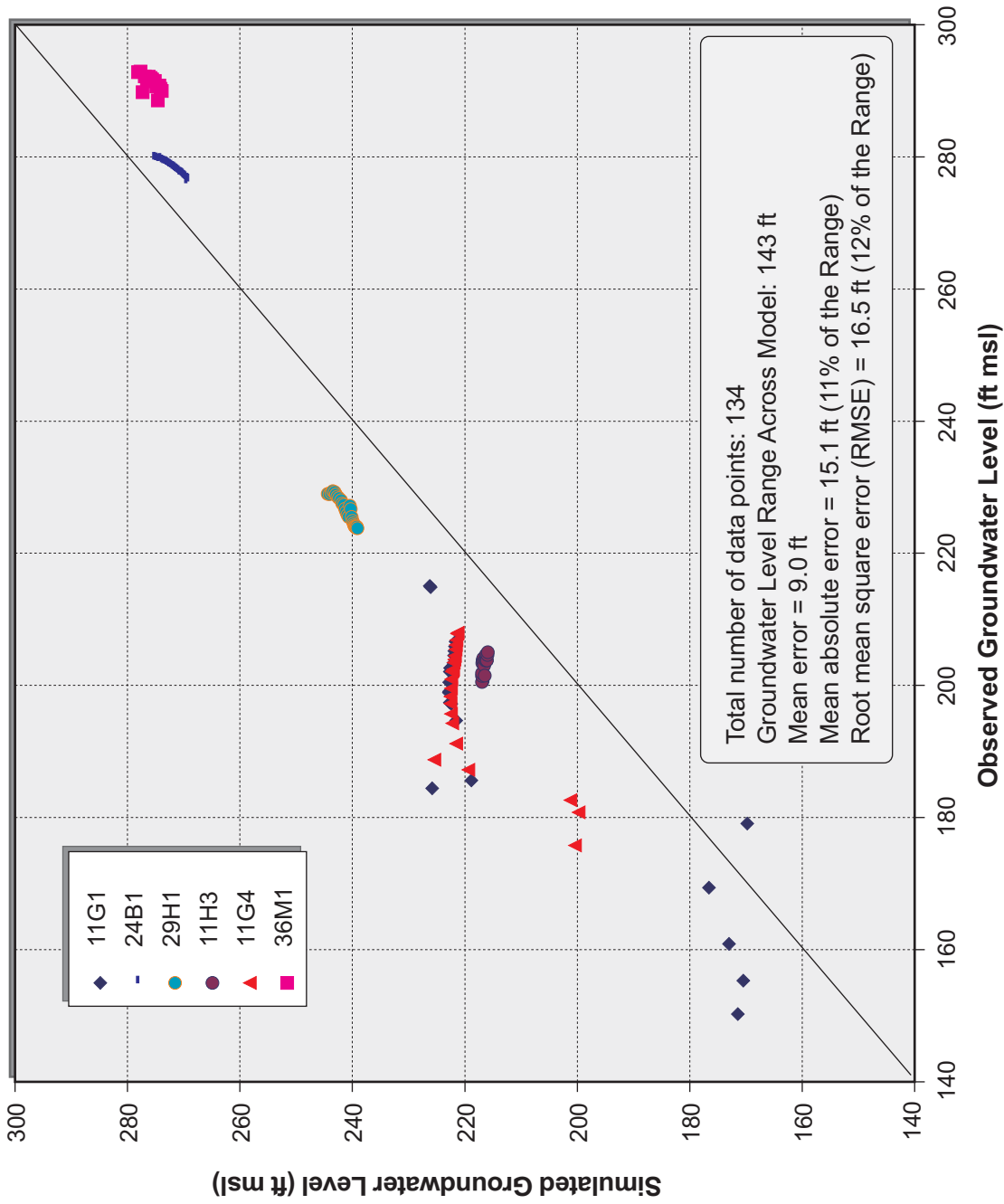
However, the model is reasonably calibrated in the immediate vicinity of the USG wells near Ocotillo. Because of the lack of wells the model is not calibrated over its entire domain. Therefore uncertainty remains in the model.

The model shows reasonable capability to simulate groundwater level change in response to pumping changed in Layer 1 near Ocotillo. Therefore, the model is useful as a tool to help in the evaluation of the impact of future groundwater pumping in the Ocotillo area, but needs to be supported by continued monitoring.



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Figure 16
Calibration
Layer 1



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Figure 17
Calibration
Layer 2

Model Scenarios

A series of modeling scenarios were presented (Bookman-Edmonston 2004) to evaluate the effects of increased pumping on the Basin. These scenarios include:

- The baseline case assumes 347 AF/Yr of groundwater pumping by USG and an additional 122 AF/Yr of pumping by all other producers. These rates stay constant over the 80-year scenario.
- The 650 AF/Yr Pumping Scenario assumes 650 AF/Yr of groundwater pumping by USG. Pumping from other wells increases at 1.4 percent per year with the total pumping increasing from 122 AF/Yr at the start of the scenario to 371 AF/Yr at the end of the scenario. Total groundwater pumping at the end of the scenario is 1,021 AF/Yr.
- The 767 AF/Yr Pumping Scenario assumes 767 AF/Yr of groundwater pumping by USG. Pumping from other wells increases at 1.4 percent per year with the total pumping increasing from 122 AF/Yr at the start of the scenario to 371 AF/Yr at the end of the scenario. Total groundwater pumping at the end of the scenario is 1,138 AF/Yr.

The Baseline and potential future impacts from increased pumping at USG are summarized below in terms of annual decline in simulated groundwater levels:

- to 0.2 feet per year for the Baseline case based on the results presented on Table 6-1 of the Draft EIR/EIS Volume II Appendix B2 (Bookman-Edmonston 2004).
- to 0.5 feet per year for the 650 AF/Yr Pumping Scenario based on the results presented on Table 6-2 of the Draft EIR/EIS Volume II Appendix B2 (Bookman-Edmonston 2004).
- to 0.7 feet per year for the 767 AF/Yr Pumping Scenario based on the results presented on Table 6-3 of the Draft EIR/EIS Volume II Appendix B2 (Bookman-Edmonston 2004)

As discussed in Subsection 4.3.6, the average rate of decline ranges from 0.4 feet per year or 1 foot every 2.5 years (Well 36H1) to 0.13 feet per year or 1 foot every 7.7 years (Well 34B1, not shown). By way of comparison, over the same time period, the numerical model predicts a range of declines from 1 foot every 4.4 years to 1 foot every 8 years. Using the wells currently monitored by the USGS, the average rate of decline from 1975 to 2007 was estimated at 0.27 feet per year. During these years, the total pumping was estimated to range from 440 to 880 AF/Yr. These simulated annual

drawdown rates are consistent with the observed groundwater level measurements discussed in Subsection 4.3.6. This suggests that the model does provide a reasonable estimate of the potential future drawdown.

To further evaluate model performance, a local groundwater budget was derived from the model for the active region of Layer 1 north and west of the Yuha Wells fault. This area appears to be the best calibrated area in the model, so the hydrologic budget was isolated and analyzed. Table 4.0-6 provides a summary of the local groundwater budget for this portion of Layer 1 at the end of the 80-year scenario when the total groundwater pumping is at its maximum.

Table 4.0-6
Subregional Groundwater Budget for Layer 1 in the Ocotillo Area*

	Baseline	650 AF/Yr Pumping Scenario	767 AF/Yr Pumping Scenario
Inflow (in AF/Yr)			
Recharge	1,018	1,018	1,018
Leakage from Layer 2	13	61	75
Decline in Groundwater Storage	140	434	488
Total Inflow	1,171	1,513	1,581
Outflow (in AF/Yr)			
Wells	469	1,021	1,138
Layer 1 Outflow	265	187	166
Leakage to Layer 2	437	305	277
Total Outflow	1,171	1,513	1,581

*At the end of the 80-year scenario when total groundwater pumping is at its maximum.

The local groundwater budget presented in Table 4.0-6 shows that groundwater inflow is primarily derived from stream runoff represented by the MODFLOW recharge module. Other sources of inflow include leakage from Layer 2 and release from groundwater storage through the decline of groundwater levels. The outflows consist of groundwater pumping from wells, leakage from Layer 1 to Layer 2, and Layer 1 subsurface flow to the south. The increased pumping simulated in the scenarios results in more recharge and less discharge. The change in the water budget—expressed as a percent of the total change in pumping—is described below:

- 53 percent of the pumping volume is derived from a decline in groundwater storage
- 24 percent of the pumping volume is derived from a decline in groundwater leakage from Layer 1 to Layer 2

- 14 percent of the pumping volume is derived from a decline in groundwater flow through Layer 1 to the south
- 9 percent of the pumping volume is derived from increased leakage from Layer 2 into Layer 1

The percent change in the water budget elements was the same in both pumping scenarios.

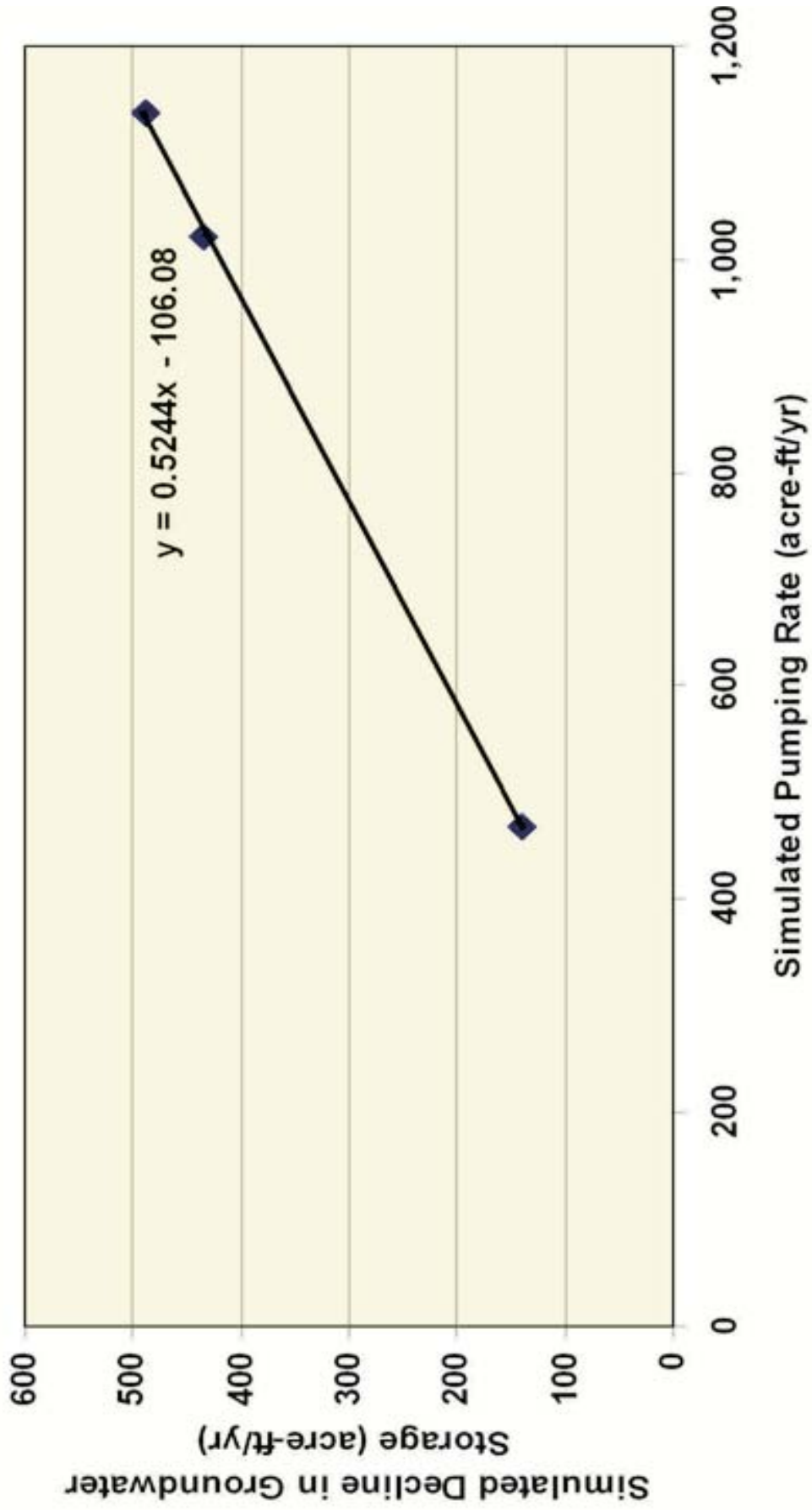
Figure 18 presents a comparison of the decline in groundwater storage as a function of the total groundwater pumping at the end of the 80-year scenario. This shows a linear relationship of pumping versus storage decline for the three different scenarios. A linear regression analysis on these scenario results indicates that every 100 AF/Yr of increase in pumping produces a 52.4 AF/Yr decrease in groundwater storage. This is consistent with the percentages presented above. Therefore, it is assumed that the other percentages also vary linearly. Accordingly, using this assumption based on the linear regression analysis presented in Figure 16, every 100 AF/Yr increase in pumping would produce a:

- 53 AF/Yr decrease in groundwater storage
- 24 AF/Yr decrease in groundwater leakage from Layer 1 to Layer 2
- 14 AF/Yr decrease in groundwater flow through Layer 1 to the south
- 9 AF/Yr increase in leakage from Layer 2 into Layer 1

The Draft EIR/EIS cites the potential for groundwater quality deterioration in the Basin primarily should the relatively poor quality Layer 2 water migrate upward into the higher quality Layer 1 water (See also Subsection 4.3.7). The model results indicate that every 100 AF/Yr increase in pumping would produce a 9 AF/Yr leakage from Layer 2 to Layer 1. The potential leakage from Layer 2 is primarily situated in upgradient areas to the north and west, and from upward migration directly underneath the larger production wells. Deterioration of water quality, based on the model results, would not be expected to be widespread. However, it could be locally significant in the larger production wells.

Summary

With regard to the capabilities of the model, the calibration is strongest in the area of the USG wells near Ocotillo. Analysis of the model results show that the model simulations produce results that are comparable to the observed groundwater level data.



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Figure 18
Relationship of
Simulated Decline in
Storage as a Function
of Pumping

This model has limitations. However, based on an independent review of the groundwater model developed for the Basin by Todd Engineers (see Appendix C of the Final EIR/EIS), the model appears to have the capability to simulate groundwater conditions especially for Layer 1 in the vicinity of Ocotillo. Therefore, the future case scenarios should provide a reasonable estimation of the future results.

4.3.9 Groundwater Model Calibration

Several comments refer to details of the calibration of the numerical groundwater model applied in the Draft EIR/EIS to evaluate impacts in the Basin. The numerical groundwater model is described in the 2004 Bookman-Edmonston report, *Ocotillo/Coyote Wells Hydrology and Groundwater Modeling Study*, (Modeling Study).

Calibration is the process wherein inputs to a numerical model are adjusted in order to match field conditions within some acceptable criteria. In the Basin, there is considerable uncertainty in the estimates of many model input parameters including recharge, subsurface outflow, and hydrogeologic characteristics. Changing some or all of these parameters can result in a series of model runs with various predicted heads. The model run that both represents the hydrogeologic conceptual model and matches field data can be considered a calibrated model. The process followed by Bookman-Edmonston (2004) to develop a final calibrated model is discussed below.

Bookman-Edmonston produced many iterations of the groundwater model before meeting with the USGS to finalize the model's calibration. Calibration runs produced various predicted drawdowns. Some of these calibration runs had predicted groundwater levels that were very close to observed drawdowns, but had aquifer parameters that may not have been realistic for the Basin, so these calibrations were not used. Aquifer parameters were based on pumping tests and published references, and were conformed to the geology of the Basin as conceptually understood. Bookman-Edmonston presented a reasonably calibrated model to the USGS (Mr. Peter Martin and Mr. Greg Lines) during a meeting on July 24 and 25, 2003. Details of the model were reviewed by the USGS during the meeting. The simulated groundwater levels in the model matched observed groundwater levels throughout most of the model area. However, in the Yuha Estates area, the correlation between predicted groundwater levels and observed groundwater levels was not as good as in most of the model area.

USGS requested changes to the model to improve the calibration of the Yuha Estates area. These changes were not based on new data, but on the experience of the USGS personnel present. Some of these changes had little or no effect to the overall

groundwater model calibration. However, some of the changes that were made during this 2-day trial and error period produced predicted drawdowns in the Yuha Estates area that are closer to their observed drawdowns and have aquifer parameters that are reasonable for the Basin. Other areas of the model, however, show calibrated groundwater levels that less closely match the observed data. The final result is a groundwater model with aquifer parameters, boundary conditions, and recharge and discharge rates that are reasonable, given the available data.

Presented below are items adjusted during the July 2003 calibration meeting with the USGS. The final calibrated groundwater model is a reasonable working groundwater model for the Basin.

1. Constant Head Boundaries - The eastern and southern boundary heads were adjusted to allow modeled groundwater flow to move at different rates to the east and south. These adjustments were made until overall predicted groundwater levels generally matched observed groundwater levels. These boundaries are shown on Figure 5-2 of the Modeling Study (Bookman-Edmonston 2004). The constant heads along the southern boundary were set as constant values (i.e., head does not change from west to east along this boundary). The constant heads along the east boundary were variable along this boundary (values change with locations). The values of the constant heads were based on the initial model run (1925) and adjusted in the calibration process. The sensitivity of the constant heads was not analyzed, but the constant heads were adjusted during the calibration process and the values used are the optimum boundary conditions determined during the calibration for the overall groundwater flow of the Basin.
2. Recharge - The Basin recharge rate was lowered (from 2,055 AF/Yr to 1,077 AF/Yr). The recharge rate is lower than most other estimates for the Basin. Mark (1987, see Appendix B2 for references used herein) estimated recharge using four methods and obtained results of 536, 1,044, 1,650, and 1,820 AF/Yr. Mark (1987) concluded that 536 AF/Yr was unrealistic and used 1,650 AF/Yr for his work. Skrivan (1977) estimated the recharge at 2,600 AF/Yr. Huntley (1979) states that recharge is between 870 and 1,672 AF/Yr. Zipp (1982) suggests that the recharge rate may be as high as 4,600 to 7,200 AF/Yr. Bookman-Edmonston (1996) estimated the recharge at 2,400 AF/Yr. More discussion regarding previous studies can be found in General Response Subsection 4.3.7, Water Balance.

3. Laguna Salada Faults - The Laguna Salada Fault was changed from a low hydraulic conductivity boundary to a no-flow boundary. The change did not affect the overall model and represents a realistic geologic interpretation of the behavior of the groundwater adjacent to the fault.

4. Other Faults - The hydraulic conductivity of Layer 2 was decreased and two northeast-southwest barriers were added to simulate faults. These model changes caused a subsequent change to the model's recharge rate. The justification for these changes and their effects on the model are explained below. A groundwater barrier between wells in the Ocotillo area was included in the pre-USGS meeting model, as well as in previous model versions, to calibrate the wells with a lower groundwater gradient southeast of the Ocotillo area from those to the north. This barrier was replaced by a northeast-southwest fault at the meeting. The faults simulated in the model were placed based on work by Dr. Thomas Rockwell, PhD, of San Diego State University. Rockwell's findings show that the Elsinore fault and Laguna Salada faults are not continuous, but rather offset by zones of northeast-trending left-lateral faults. These left-lateral fault zones relieve stresses imposed by movement of the right-lateral Elsinore to the Laguna Salada fault by left-lateral strike-slip movement and rotation. The Yuha Wells fault is one of these left-lateral fault zones for which corresponding surface movement had been found (Rockwell, personal communications 2003). The nature of the relationships of these faults to groundwater flow is unclear. However, the need for the barrier in the Ocotillo area for well calibration suggests that they are groundwater barriers or have juxtaposed material with different hydraulic conductivities. With addition of the simulated Yuha Wells fault, the model was adjusted to calibrate more closely with wells in the Yuha Estates area.

5. Yuha Estates - The Yuha Estates area was the subject of focused calibration reflecting the area's unique geologic location and observed groundwater behavior. As described in more detail in Section 3 of Appendix B2 of the Draft EIR/EIS, the area is located on a moderate structural high, which coincides with the apex of a large northeast-southwest-trending southwest-plunging anticline. Additionally, driller logs on Yuha Estates wells suggest that the alluvial cover is only about 270 to 330 feet thick, and that the wells and their perforations are mostly within the Palm Springs Formation (Layer 2). The unique geology in the Yuha Estates area explains large initial drawdowns (i.e., Well 11G1 from about 1978 to 1982), their initial rapid recovery (approximately 1982 to 1985), and their subsequent slower recovery (post 1985). To calibrate to the wells in the Yuha

Estates area using this geologic interpretation, the hydraulic conductivity of Layer 2 in the model was lowered to 0.35 ft/day. Additionally, the presumed rate of groundwater recovery to the area was significantly reduced by the addition of the above referenced barriers.

6. **Aquifer Parameters** - The horizontal hydraulic conductivities were changed for each layer. A single horizontal hydraulic conductivity was used for Layer 1, 15 ft/day, and two were used for Layer 2: 1 ft/day and 0.3 ft/day. Several different horizontal hydraulic conductivity values for each layer were used in the model until the July 2003 meeting with the USGS. The horizontal hydraulic conductivity of 15 ft/day used for Layer 1 was obtained from the aquifer pumping test on USG Well No. 6. In the pumping tests, two Neuman analytical methods had an average transmissivity of 6,250 ft²/day over a 400 foot thick aquifer (Appendix B2 of the Draft EIR/EIS). In Layer 2, a horizontal hydraulic conductivity of 1 ft/day was used for most of the layer. This value was provided by Peter Martin of the USGS based on the USGS Borego model work. As shown in Figure 5-3 of the Modeling Study (Bookman-Edmonston 2004), a horizontal hydraulic conductivity of 0.3 ft/day was used for Layer 2 in the area of Yuha Estates. Published transmissivity values for the Palm Springs Formation are difficult to find, but work by Jansen (1983), Mark (1987), and Skrivan (1977) suggest that values from 270 ft²/day to 957 ft²/day should be expected. Assuming a 500-foot thickness for Layer 2, a horizontal hydraulic conductivity of 1 ft/day would produce a transmissivity of 500 ft²/day, and 0.3 ft/day would produce a transmissivity of 150 ft²/day. Thus, using horizontal hydraulic conductivity of 1 ft/day and 0.3 ft/day in Layer 2 is reasonable.

4.3.10 Expanded Air Quality Analysis

On November 8, 2005, the Imperial County Air Pollution Control District (ICAPCD) revised Rule 800, General Requirements for Control of Fine Particulate Matter (PM₁₀) and adopted the rules below to control PM₁₀ generated from the following activities:

Rule 801 – Construction and Earthmoving Activities

Rule 802 – Bulk Materials

Rule 803 – Carry-Out and Track-Out

Rule 804 – Open Areas

Rule 805 – Paved and Unpaved Roads

Rule 806 – Conservation Management Practices (for agricultural operations only)

The purpose of the revised Regulation VIII including Rule 800 and newly adopted rules 801 – 806 are described under Rule 800 (General Requirements for Control of Fine Particulate Matter (PM₁₀) as follows: “The purpose of this regulation is to reduce the amount of fine Particulate Matter (PM₁₀) entrained in the ambient air mass as a result of emissions generated from anthropogenic (man-made) Fugitive Dust (PM₁₀) sources generated from within Imperial County by requiring actions to prevent, reduce, or mitigate PM₁₀ emissions. The Rules contained within this Regulation have been adopted pursuant to United States Environmental Protection Agency guidance for Serious PM₁₀ Non Attainment Areas.”

This Regulation applies to any Active Operation, and/or man-made or man-caused condition or practice capable of generating Fugitive Dust (PM₁₀) except those determined exempt as defined in Part E of Rule 800. Part D.1 of Rule 800 states “Existing sources subject to this Regulation shall comply with its requirements no later than 90 days after its adoption date.” Therefore, the revised and new rules are required to be implemented by USG for all applicable fugitive dust producing activities at its Quarry and Plant and the rules mandate new and additional PM₁₀ emission controls. Many of the rules’ requirements are currently implemented by USG.

A summary of the requirements for each rule is provided below. Please reference the ICAPCD Rule Book for details on Regulation VIII and Rules 800 *et seq.* These rules are discussed here because they were not addressed in the Draft EIR/EIS released shortly after the rules were adopted.

Rule 801 – Construction and Earthmoving Activities

Applicability (Section B)

Any construction and other earthmoving activities.

Requirements (Section E)

E.1.a. For construction, comply with requirements under Section F.1 so as to limit visible dust emissions (VDE) to 20 percent opacity and comply with conditions for a stabilized surface when applicable.

E.1.b. For any earthmoving activities, comply with requirements under Section F.1 so as to limit VDE to 20 percent opacity.

E.1.c. For any non-residential development 5 acres or more, develop a dust control plan to comply with requirements of Section F.

Best Available Control Measures (Section F)

Under Section F, one or more of the following abbreviated Best Available Control Measures shall be implemented:

- Apply water or chemical stabilizer to site or construct and maintain wind barriers to limit VDE to 20 percent opacity;
- Phase work to minimize disturbed areas;
- Apply water or chemical stabilizer to unpaved haul/access roads and unpaved traffic areas;
- Restrict vehicular traffic to the area by fencing or signage;
- Track out/carry out of bulk materials shall be mitigated in compliance with Rule 803;
- Unpaved roads and unpaved traffic areas shall comply with Rule 805;
- Bulk material handling operations shall comply with Rule 802; and
- Material transport of bulk material to, from, or around the site shall comply with Rule 802.
- Comply with the approved dust control plan.

Rule 802 – Bulk Materials

Applicability (Section B)

Outdoor handling, storage, and transport of bulk material is required to meet stringent new dust prevention standards.

Requirements (Sections E.1 – E.4)

Bulk material handling and storage, material transport, and haul trucks shall comply with one or more requirements under Section F.1 so as to limit VDE to 20 percent opacity.

Best Available Control Measures (Section F)

Under Section F, one or more of the following Best Available Control Measures shall be implemented:

- F.1 Bulk Material Handling/Transfer – Spray with water, apply and maintain chemical stabilization, or protect from wind erosion by sheltering or enclosing the operation and transfer line.
- F.2 Bulk Material Storage – Comply with conditions for a stabilized surface, cover bulk materials, construct and maintain barriers with less than 50 percent porosity, or utilized 3-side structure with height equal or greater than storage pile.
- F.3 Material Transport/Hauling – Completely cover or enclose all haul trucks loads or load trucks per Section 23114 of the California Vehicle Code (6 inches below sides of container area and peak is below sides); Cargo compartments constructed so that no spillage or loss of bulk material can occur; and the cargo compartment is cleaned or washed at delivery site after removal of bulk material.

Rule 803 – Carry-Out and Track-Out

Applicability (Section B)

This rule applies to all sites subject to Regulation VIII where track-out or carry-out occurs on paved public roads or paved shoulders.

Requirements (Section E)

Any person who causes the deposition of bulk material by tracking-out or carrying-out onto a paved road shall comply with requirements under Section F.1.

Best Available Control Measures (Section F)

Under Section F, one or more of the following abbreviated Best Available Control Measures shall be implemented:

- Clean up of any bulk material tracked-out or carried-out at the end of the workday;
- Install one or more track-out prevention devices or other ICAPCD approved track-out control devices or wash down systems; or maintain paving, chemical stabilization, or at least 3 inches of gravel for a distance of 50 feet at access points where unpaved traffic surfaces adjoin paved roads.

Rule 804 – Open Areas

Applicability (Section B)

Rule shall apply to any open area of 3.0 acres or more within rural areas and that contains at least 1,000 square feet of disturbed surface area.

Requirements (Section E)

For open areas as defined, comply with conditions of a stabilized surface at all times and limit VDE to 20 percent opacity and restrict trespass on open areas with signs and physical barriers.

Best Available Control Measures (Section F.1)

Under Section F, one or more of the following Best Available Control Measures shall be implemented:

- Apply and maintain water or dust suppressant(s) to all unvegetated areas.
- Establish vegetation on all previously disturbed areas.

Rule 805 – Paved and Unpaved Roads

Applicability (Section B)

Applies to any new or existing public or private paved or unpaved road, road construction, or road modification project.

Requirements (Section E)

Operation, use, or maintenance of any unpaved haul/access road and unpaved roads with 50 or more average vehicle trips per day, the owner/operator shall limit VDE to 20 percent opacity and comply with requirements of a stabilized unpaved road per Section F.1.

Best Available Control Measures (Section F)

Under Section F, one or more of the following abbreviated Best Available Control Measures shall be implemented for unpaved roads, including haul and access roads, and unpaved traffic areas:

- Pave;
- Apply chemical stabilizers;
- Apply and maintain gravel;
- Water spray one or more times daily;

- Close the road;
- Restrict unauthorized vehicle access; and
- Implement other methods that effectively limits VDE to 20 percent opacity and meets conditions of a stabilized unpaved road.

Implementation of the described rules above within ICAPCD Regulation VIII, including revised Rule 800 and newly adopted Rules 801 through 805, will be included as a Condition of Approval for all applicable man-made fugitive dust sources as applicable.

CONCLUSION

Regulation VIII (Rules 800-806) currently apply to USG's existing and proposed operations. All components of the existing and proposed Project will comply with the existing air quality regulations. The Applicant is subject to periodic site inspections and review. Air permits are renewed annually.

4.3.11 Land Use (Consistency with ONCAP)

Several commenters questioned whether the proposed increase in the amount of groundwater pumped from the Basin would be consistent with the 1994 Ocotillo/Nomirage Community Area Plan (ONCAP), and/or suggested that the Draft EIR/EIS failed to consider the "full build-out" of the residential communities of Ocotillo and Nomirage.

As a part of the Land Use Element of the County General Plan, ONCAP serves as a guide to the decision makers, staff and the public to address the distribution, general location and extent of uses of land for housing, commerce, industry, open space, and public facilities within the townsite of Ocotillo and the communities of Nomirage, Painted Gorge, Yuha Estates, and the surrounding area. The primary purpose of ONCAP is to identify the goals, policies, and standards that will guide the physical growth of the planning area.

ONCAP describes existing land uses with the planning area and the facilities and services, which provide public infrastructure to support these uses. Also stated are goals and objectives for future growth, and environmental resource protection and constraints; and, policies and programs necessary to guide future growth.

ONCAP designates the proposed distribution and general location and extent of the uses of land for housing, business, industry, open space, including natural resources,

recreation and enjoyment of scenic beauty, education, public buildings and grounds, solid waste disposal facilities, and other categories of public and private uses of land. ONCAP includes a statement of the standards of population density and building intensity for the various land use categories covered by the plan. ONCAP shows in a very general way, a range of uses for land within the planning area, without projecting when or how a use will be developed.

ONCAP anticipates residential development at densities ranging from one dwelling unit per 40 acres to one dwelling unit per 0.5 acres. However, ONCAP also provides that the proposed residential density "is limited by water use, and septic systems and other factors which may effect the site." ONCAP also states that, due to the lack of sewer facilities and water constraints, it is not expected that large residential subdivisions or multiple-family housing will be developed within the planning area. In fact, after noting that Ocotillo/Nomirage Community Area had a population of 460 people according to the 1990 census, ONCAP states as follows: "Due to water constraints, it is not anticipated the Ocotillo/Nomirage Community Area will experience a significant amount of population growth."

Thus, notwithstanding the residential densities identified on the Community Area Map, ONCAP does not contemplate significant new residential development or a substantial increase in population in the communities of Ocotillo and Nomirage. As indicated in the Draft EIR/EIS, the proposed increase in groundwater pumping by USG would not cause a net deficit in aquifer volume or a lowering of the groundwater table level to a level that would not support existing or planned land uses.

Objective 5.8 of ONCAP states as follows: "The County will work with USG and the Imperial Irrigation District to examine other water sources that can be used at the USG manufacturing plant and reduce their dependence on groundwater." In accordance with this objective, alternative water sources were evaluated in the Draft EIR/EIS. Additionally, as indicated in General Response 4.3.4 above, the County, USG, and IID are working together to examine other water sources that can be used at the Plant and reduce their dependence on groundwater.

The ultimate determination of whether the Project is consistent with ONCAP and the County's General Plan as a whole lies within the sound discretion of the County decision-makers. As indicated above, there is substantial evidence to support a finding of consistency with ONCAP in this case.

4.3.12 Climate Change

No regulatory agency in California has established a threshold by which to measure the significance of a project's greenhouse gases (GHG) emissions. Further, no agency has developed guidelines on how to prepare a CEQA impact assessment for a project's contribution to climate change. Nonetheless, the following discussion is provided as a good faith attempt to respond to relevant climate change comments, assess the Project's impacts on climate change as well as climate change impacts on the Project, and to provide decision makers and the public with information regarding this issue.

Introduction

In 2006, the California Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006, and the Governor signed it into law in September. AB 32 is designed to place California at the forefront of world efforts to reduce GHG emissions. Among other things, AB 32 requires the California Air Resources Board (ARB) to adopt rules and regulations to reduce statewide GHG emissions to 1990 levels by 2020. Under AB 32, ARB has the primary responsibility for addressing climate change issues.

Gases that entrap heat in the atmosphere are called GHGs. GHGs include water vapor, carbon dioxide (CO₂), methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Individual GHGs have varying global warming potential (GWP). The carbon dioxide equivalent (or CO₂e) is an internationally accepted measure that quantifies GHGs in terms of the amount of CO₂ that would have the same global warming potential. For example, CO₂ has a GWP of one compared to methane's GWP of 21. Therefore, methane has a 21 times greater molecule per molecule GWP than CO₂. CO₂ emissions, however, are far greater than those of other GHGs.

CO₂ is an odorless, colorless gas with natural and anthropogenic sources. Natural sources include: decomposition of organic matter; respiration; evaporation from oceans; and volcanoes. Anthropogenic sources of CO₂ are from burning hydrocarbons and wood.

California's Legislative and Regulatory Greenhouse Gas Emission Reduction Regime

AB 32 is (codified at California Health and Safety Code § 38500 *et seq.*). Among other things, the Legislature declared that:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential

adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems. (HSC § 38501(a)).

AB 32 is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects throughout California businesses and lifestyles as well as effects on other states and countries. In addition to its mandatory provisions requiring substantial GHG reductions, AB 32 sets forth an aggressive time frame within which these emission reduction targets must be implemented. In particular, the Legislature empowered the ARB to hold public hearings and promulgate regulations implementing the following major components of the statute by December 31, 2009:

- Develop GHG emission inventories from direct and indirect sources.
- Develop a framework for GHG emissions reporting and verification.
- GHG emissions to be reduced to 1990 levels by 2020.
- Complementing efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.
- Increasing regulatory and public scrutiny of business operations and regulatory compliance.
- Enhancing the potential for regulatory enforcement, fines and penalties and citizen suit actions.

In addition to AB 32, on June 1, 2005, the Governor issued Executive Order S-3-05, which established the following GHG emission reduction targets for California: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels.

U.S. Gypsum's Voluntary Efforts to Track, Report and Certify Greenhouse Gas Emissions

Beyond the impending implementation of California's GHG emission reduction regime, USG has taken specific actions to track, report and certify GHG emissions. In November 2006, USG voluntarily joined the California Climate Action Registry (CCAR), a group of distinguished public and private sector organizations taking demonstrated leadership on climate change. USG was the first building materials manufacturer to participate in

this program. As a member, USG has worked with the CCAR to develop an annual GHG emission tracking, reporting and certification protocol, that USG is applying to all of its facilities, including the Project. In particular, USG is certifying its GHG emissions data for the facility with the CCAR.

It is anticipated that a national Climate Registry (National Registry) will eventually link with both voluntary and mandatory reporting programs throughout the United States and in other countries. The CCAR is playing a key role in establishing and administering the National Registry. USG expects to join the National Registry as well. The National Registry is expected to develop rigorous GHG accounting standards and reporting requirements.

Estimates of Greenhouse Gas Emissions

The Plant and Quarry, as well as associated activities, have used a variety of fuels over time for mobile sources, powering the Plant and for Quarry operations. Under the CCAR emission reporting regime, direct emissions of GHG are generated at the Project from sources that are owned or controlled by USG, and include stationary combustion (e.g., plant burner and emergency generators) and mobile combustion sources (e.g., company owned off-road equipment and vehicles). Additionally, the Project accounts for indirect GHG emissions, which are generated by sources owned or controlled by other entities. These indirect sources are primarily from fossil fuel combustion at third party power plants.

The following figures are based on GHG preliminary emission calculations by USG in anticipation of submitting this information to the CCAR, and are subject to revision. These figures include estimated CO₂ emissions from the Project, as well as other greenhouse gases. Additionally, the figures assume business as usual and do not include reductions based on anticipated statutory or regulatory mandates requiring GHG emission reductions. In particular, these estimates do not factor in the aggressive mandates of AB 32, and its implementing regulations, which are anticipated to force sharp reductions of GHG emissions across a broad swath of California businesses.

- Maximum direct GHG emissions CO₂e associated with the Proposed Action in comparison with the baseline year of 1998 are as follows: During the 1998 baseline, the facility generated approximately 72,200 tons of CO₂e per year. The proposed action will result in about 110,000 tons of CO₂e per year, which represents an increase of approximately 37,800 tons of CO₂e per year, from business as usual.

- Maximum indirect GHG emissions CO_{2e} associated with the Proposed Action from the baseline year of 1998 are as follows: During the 1998 baseline, the facility generated approximately 14,000 tons of CO_{2e} per year. The Proposed action will generate approximately 23,700 tons of CO_{2e} per year, which represents an increase of approximately 9,700 tons of CO_{2e} per year, from business as usual.

Potential Climate Impacts From the Project Are Not Individually Significant

As discussed above, the Legislature has recognized that global warming poses a "serious threat to the economic well-being, public health, natural resources, and the environment of California." Assuming the reduction mandates of AB 32 are roughly evenly applied throughout all industrial sectors in California, the Project will reduce its GHG emissions to 1990 levels by or before 2020. Additionally, recall that Executive Order S-3-05 requires an aggregate reduction of GHG emissions to 80 percent below 1990 levels by 2050 throughout California. Based on these governmental mandates to control GHG emissions, as well as USG's voluntary participation in the CCAR, GHG emissions from the Project are projected to be measurably less than the above-referenced GHG emission estimates by 2020, or earlier. In fact, the GHG emissions may be below the 1998 baseline levels by 2020.

However, even if projected GHG emission reductions from the Project occurs, the Project would still generate GHG emissions above baseline levels for some years prior to 2020. Moreover, it is possible that actual GHG reductions will be more or less than projected. In any event, based on current understandings and GHG measurements, it is not anticipated that the individual effect of the Project's GHG emissions on the environment will be significant.

Among other things, while the Project may emit up to a maximum of approximately 47,500 tons of additional (above baseline) CO_{2e} emissions per year (assuming business as usual) from both direct and indirect sources, the EPA estimates 2005 national CO_{2e} emissions of 7,260.4 teragrams (i.e., million metric tons). Thus, the Project's CO_{2e} emission increases represent less than 0.00000654 percent of the national CO_{2e} loading, and an even smaller percentage of the worldwide CO_{2e} loading. This does not account for any mandated or voluntary GHG reductions the company may achieve.

The CEQA Guidelines define a "significant effect on the environment" as a "substantial adverse change in the physical conditions which exist in the area affected by the proposed project." See 14 Cal. Code Regs. §1502(g). The GHG emissions from the Project, standing alone, will not cause global warming in any meaningful sense, or

otherwise result in an adverse change in the physical conditions that exist in the area affected by the Project.

Potential Climate Impacts on the Project Are Remote and Speculative

As a corollary to the assessment as to whether an individual project's GHG emissions can reasonably be characterized as significantly impacting global warming, an inquiry may be made as to whether environmental changes from global warming can be predicted to adversely impact the Project or the environmental setting and baseline physical conditions affecting the Project. Possible adverse effects of climate change over time (i.e., decades) on a project may be notable. Two potential impacts on the Proposed Action are analyzed here as most relevant – sea level rise and precipitation levels in the Project area.

Climate change is also referred to as global warming. Global warming may lead to a reduction of polar ice caps and result in sea level rise. Rising sea levels may result in the displacement of coastal businesses and residences and damage to marine ecosystems. However, the Project's location in the western area of Imperial County insulates it from direct impacts associated with sea level rise.

Additionally, while it is possible to imagine that climate change may alter rainfall patterns in this arid region, a review of the reasonably available scientific literature did not yield a projection of global warming's impact on precipitation in western Imperial County over the next several decades. Indeed, it is possible that global warming could result in more, not less, rainfall in the region, which could act to recharge groundwater in the area. However, based on the lack of available data, the impact of climate change on area rainfall patterns is unforeseeable at this time.

Given the inherent uncertainty regarding regional precipitation level changes due to climate change the potential impact from climate change on the Proposed Action is too speculative for evaluation. See CEQA Guidelines, Section 15145.

Cumulative Impacts on Climate Change

As described above, the Project may emit up to a maximum of approximately 47,500 tons additional CO_{2e} emissions per year above baseline from both direct and indirect sources, for a time. The actual level of increase may be below reasonably anticipated thresholds for significance (although none currently exist), even when considered cumulatively.

For example, the estimated GHG increase from the Project is more than an order of magnitude less than the estimated GHG reductions to be gained from major ARB initiatives underway for 2007-2009, such as manure management (estimated reduction of approximately 1 million tons CO₂e annually), reducing venting/leaks from oil and gas systems (estimated reduction of approximately 1 million tons CO₂e annually), detection, repair and recycling equipment for sulfur hexafluoride (estimated reduction of approximately 0.7 million tons CO₂e annually), and port electrification (estimated reduction of approximately 0.5 million tons CO₂e annually). The estimated GHG increase from the Project is also considerably less than the GHG reductions that will flow from minor ARB GHG reduction initiatives, such as electrification of agricultural engines (estimated reduction of approximately 0.1 million tons CO₂e annually) and alternative chemicals in fire suppression systems (estimated reduction of approximately 0.1 million tons CO₂e annually).

As these examples indicate, the relatively small increases in GHG emissions that may result from the Proposed Action would not interfere with the State's ability to achieve the GHG reduction goals of AB 32.

Further, since the demand for wallboard remains strong, a no project alternative would lead to more wallboard production outside of California, perhaps in other states or countries with little or no emission controls when compared to California's requirements. Since California is globally acknowledged as having among the most stringent energy efficiency and emission control requirements, wallboard production outside California would generate more GHG emissions. Additionally, transportation of the products into California (whether by truck, rail, or ship) would produce even more GHG emissions from the burning of fuel associated with product transportation. On this point, USG has determined that "transportation of gypsum board accounts for over 10 percent of the embodied energy," associated with the product. Thus, the no project alternative would have greater environmental impacts than the emissions from the Project.

In recognition of its desire to reduce GHG emissions from its facility USG; (a) is conducting a comprehensive operational energy audit to identify aspects of the Project's operation that can feasibly be made more efficient in terms of energy usage, particularly the usage of electricity and natural gas; (b) is evaluating integrating one or more wind turbine generators into the Project's operations. USG has engaged a wind generator supplier to conduct a wind velocity and consistency study in the area of the Project. Based on the results, and depending on the details of the wind turbine selected and the average wind speed in the area, USG estimates that a single wind turbine could generate up to approximately 3.9 million kilowatts annually or approximately

5.7 percent of the total Project electrical usage; and (c) has acquired an electric forklift to replace the function of a diesel powered vehicle. Despite the relatively small increase in GHG emissions from the Project, and the lack of a causal link between the Project's emissions and anticipated climate change, the following mitigation measure has been identified, which will substantially lessen the potential for the Project to result in cumulative impacts on climate change:

- Mitigation Measure 1: USG has already acquired approximately \$1.6 million in emission credits for the Project to meet applicable air quality standards. Similarly, to the extent necessary, USG will acquire recognized carbon credits to offset the Project's increased GHG emissions.

4.3.13 Recirculation of the EIR/EIS

The circumstances under which a Draft EIR/EIS must be recirculated for public comment under CEQA and NEPA are substantially similar. Section 15088.5(a) of the CEQA Guidelines, provides as follows:

A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation include, for example, a disclosure showing that:

- (1) *A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.*
- (2) *A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.*

- (3) *A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.*
- (4) *The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.*

In response to comments on the Draft EIR/EIS, information has been added to the document, and new or different mitigation measures have been proposed. However, as explained in more detail elsewhere in these Responses to Comments, none of this information shows that a new significant environmental effect, or a substantially more severe environmental effect, would result from the Project. Furthermore, no new or different mitigation measure or alternative has been added to the Draft EIR/EIS that the Project proponent has "declined to adopt," and there is no evidence that any new or different mitigation measure would itself result in any significant environmental impact. Stated another way, the new information added to the Draft EIR/EIS is not "significant" within the meaning of Section 15088.5(a) of the CEQA Guidelines because the Draft EIR/EIS has not been changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the Project or a feasible way to mitigate or avoid such an effect that the Project's proponents have declined to implement. Therefore, recirculation of the Draft EIR/EIS is not required.

4.3.14 Mine Reclamation

Mine reclamation is regulated by the California Surface Mining and Reclamation Act (SMARA). It is administered by the Local Enforcement Agency, SMARA Lead Agency, (in this case, Imperial County) with oversight by the California Department of Conservation, Office of Mine Reclamation (DOC/OMR). Mining and reclamation are monitored annually by the designated lead agency with reporting to the State. Under SMARA, a mine operator must submit a Reclamation Plan as part of its (Land Use Permit) application to Imperial County. A Reclamation Plan was submitted in March 2003 and revised in June 2003. It appears under separate cover and is incorporated by reference in the Draft EIR/EIS. The Reclamation Plan is also summarized in Subsection 2.5.3.3 Quarry Reclamation in the Draft EIR/EIS. The Draft EIR/EIS evaluates the potential environmental impacts of the Reclamation Plan and other aspects of the Proposed Action. A Revegetation Plan is one element of the Reclamation Plan. The

Project Revegetation Plan was prepared in 2002, and is included as Appendix C-3 of the Draft EIR/EIS. The DOC/OMR commented on the Reclamation Plan in 2003. The DOC/OMR is also participating in review and comment of the Draft EIR/EIS. Based on comments received in the CEQA/NEPA review and comment period and County and BLM recommendations and conditions the Reclamation Plan will be considered for approval with conditions or revisions. The Applicant, at County direction, may be directed to modify the Reclamation Plan to reflect DOC/OMR comments and Lead Agency recommendations.

As mine plans are modified Reclamation Plans are revised to reflect proposed or planned changes. Reclamation commitments are conditioned by the County and bonded for performance. Projected reclamation costs are reviewed annually. In the event of non-performance the County may attach the bond and complete closure and reclamation independent of the operator.

5.0 Response to Comments

Specific, individual responses to selected specific comment letters received on the Draft EIR/EIS are provided in this section. Individual responses were prepared for all comment letters received from Agencies and Organizations (Table 5.0-1), and Private Citizens (Table 5.0-2 and 5.0-3).

Letters reproduced in this section of the Final EIR/EIS were scanned, and then divided into specific comments. Thus, a letter covering only one topic received only one response. Most letters included comments on more than one issue. These letters were divided into Comments 1, 2, 3, 4, and so on. A response to each comment is provided immediately following the comment itself. All comment letters received on the Draft EIR are reproduced in their original form.

When comments have resulted in changes to the text of the Draft EIR/EIS, additional text is underlined and deleted text is shown by ~~strikeout~~. Referenced revisions appear in Section 3.0 Draft EIR/EIS Errata of the Final EIR/EIS.

RESPONSES TO COMMENTS ON THE DRAFT EIR/EIS

The County and the BLM received a total of 39 individual comment letters and over 500 electronic mail messages (emails) and form comments on the Draft EIR/EIS for the USG Expansion/Modernization Project (Proposed Action or Project). The individual comment letters and emails are listed in Table 5.0-1.

An annotated copy of each comment letter and email follows. Each comment letter and email has been assigned a corresponding number, and specified comments within each comment letter or email are also numbered. For example, comment letter "1" is from the California Department of Toxic Substances Control. The comments within this letter are numbered "1-1," "1-2," "1-3," and so on.

In accordance with requirements of the CEQA and the NEPA, the County, as the CEQA lead agency, and the BLM, as the NEPA lead agency, have evaluated all comments received on the Draft EIR/EIS, and have prepared written responses. These responses

(set forth below) have been prepared in the light of Section 15204(a) of the CEQA Guidelines, which provides as follows:

In reviewing draft EIRs, persons and public agencies should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project. CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.

Additionally, in preparing responses to comments, the County and BLM were mindful of Section 15204(c), which provides that comments should be accompanied by factual support:

Reviewers should explain the basis for their comments, and, should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence.

Accordingly, responses to all comments that relate to significant environmental issues associated with the Project have been provided, and any opposing views on the issues raised have been discussed, in a good faith effort at full disclosure. Other comments, including comments that do not relate to significant environmental issues, comments that are not based on facts, reasonable assumptions based on facts, or expert opinion supported by facts, and comments that merely express the commenters' personal opinions or preferences regarding the Project, have been noted and will be forwarded to

the decision-makers for consideration in connection with their respective decisions concerning the Project.

GENERAL RESPONSES

Many of the comments submitted on the Draft EIR/EIS focused on the same or similar issues. Accordingly, "General Responses" have been prepared that incorporate, in one location, information needed to respond to the various permutations of comments received from different commenters. Consequently, a particular general response may provide more information than requested by any individual comment. The reader is referred to General Responses when appropriate.

General responses in this Final EIR address the following concerns (located in Section 4.0, Final EIR/EIS):

- 4.3.1 Peninsular Bighorn Sheep
- 4.3.2 Desert Pupfish
- 4.3.3 Flat-tail Horned Lizard
- 4.3.4 Water Use Alternatives
- 4.3.5 Imperial County's Groundwater Management Ordinance
- 4.3.6 Hydrology and Groundwater
- 4.3.7 Water Balance
- 4.3.8 Application of the Numerical Model
- 4.3.9 Groundwater Model Calibration
- 4.3.10 Expanded Air Quality Analysis
- 4.3.11 Land Use (Consistency with ONCAP)
- 4.3.12 Climate Change
- 4.3.13 Recirculation of the EIR/EIS
- 4.3.14 Mine Reclamation

Specific Comments

The Draft EIR/EIS was circulated to numerous agencies having jurisdiction over natural resources that could be affected by the proposed Project, or having expertise or interest in environmental resources. In addition, interested organizations, individuals, and businesses received the documents or were noticed of their availability. A number of agencies, organizations, businesses, and individuals submitted specific comments or opinions based on review of the Draft EIR/EIS. The majority of these comments requested clarification on specific points addressed, while some provided suggestions on the evaluation of impacts and determination of specific mitigation measures. Replies to comments from agencies, businesses, and organizations are provided in this section.

These have been organized and numbered in their order of submittal. They are listed in Table 5.0-1. Responses to individuals whose concerns were representative of public comment or who had detailed questions or suggestions regarding the Project are presented in Table 5.0-2, Private Citizens. Many of the private comments were a circulated form letter or variation of that letter. Table 5.0-2 is a list of private citizen comments and a copy of the standard form letter. A general response was prepared and is referenced for each of those submitted. In many cases other letters where so similar in content that the reader is referred to the form letter response. These individual letters and responses follow Table 5.0-2.

**Table 5.0-1
Summary of Comment Letters**

Letter No.	Date	Commenter
1	05-01-06	Department of Toxic Substances Control
2	05-12-06	Imperial Irrigation District
3	05-16-06	Center for Biological Diversity
4	05-22-06	Public Utilities Commission
5	05-24-06	State Clearinghouse and Planning Unit
6	05-24-06	The Desert Protective Council, Inc.
7	05-24-06	The Desert Protective Council, Inc. Fax
8	05-26-06	Donna Tisdale email
9	05-30-06	Diane Epperson email
10	05-30-06	Center of Biological Diversity Fax
11	06-06-06	Richard Denison email
12	06-06-06	Joyce Denison email
13	06-07-06	Michael Denison email
14	06-07-06	Imperial County Air Pollution Control District
15	06-08-06	United States Department of the Interior
16	06-08-06	State Department of Parks and Recreation
17	06-08-06	Southern California Association of Governments
18	06-12-06	Coyote Valley Mutual Water Company
19	07-08-06	Desert Protective Council email
20	07-10-06	Edie Harmon email
21	07-10-06	Defenders of Wildlife
22	07-11-06	HomePure Water Systems
23	07-14-06	Callie Mack Fax
24	07-14-06	State Department of Conservation Office of Mine Reclamation

Letter No.	Date	Commenter
25	07-14-06	U.S. Environmental Protection Agency – Region IX
26	07-14-06	U.S. Gypsum
27	07-15-06	Wiedlin & Associates, Inc.
28	07-16-06	Donna Tisdale
29	07-17-06	Sierra Club, San Diego Chapter
30	07-17-06	Sierra Club, San Diego Chapter
31	07-31-06	U.S. Department of Interior, USGS
32	07-14-06	Theresa Acerro
33	07-14-06	Robert Burns
34	07-13-06	Dan Close
35	07-16-06	David Flietner
36	07-14-06	Lara C. Miranda
37	07-13-06	Ed Stovin
38	07-17-06	Kevin Swift
39	None	Bill Welsch

**Table 5.0-2
List of Private Citizen Comments**

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
INDIVIDUALS		
1. Abela, Alice	Form Letter	
2. Acerro, Theresa	See Response	32
3. Agee, Jesse	Form Letter	
4. Allaback, Mark	Form Letter	
5. Allen, Laura	Form Letter	
6. Althiser, Kenneth	Form Letter	
7. Andrews, Alison	Form Letter	
8. Anshin, Judith	Form Letter	
9. Armstrong, Marilee	Form Letter	
10. Bach, Margaret	Form Letter	
11. Baker, Bryan	See Form Letter Response	
12. Barber, Janet	Form Letter	
13. Barber, Jennifer	Form Letter	
14. Barnes, John	Form Letter	
15. Barrows, Michael	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
16. Bartl, Alan	Form Letter	
17. Baumann, Alan & Janet	Form Letter	
18. Baur, Saskia	Form Letter	
19. Beck, Connie	Form Letter	
20. Beck, Diane	Form Letter	
21. Becker, Sue	Form Letter	
22. Beer, Julie	Form Letter	
23. Behrakis, Deborah	Form Letter	
24. Belt, Annie	Form Letter	
25. Bennett, Edward L. & Mildred J.	Form Letter	
26. Bernardi, Nancy	Form Letter	
27. Berne, David	Form Letter	
28. Berry, Vanessa	Form Letter	
29. Bertles, Martha	Form Letter	
30. Beuchat, Carol	Form Letter	
31. Blumeneau, Audrey	Form Letter	
32. Bogert, Reid	Form Letter	
33. Bolman, Diane	Form Letter	
34. Bolt, Mitchell	Form Letter	
35. Bond, Monica	Form Letter	
36. Bordenave, Michael	Form Letter	
37. Boren, Gary	Form Letter	
38. Bottorff, Ron	Form Letter	
39. Branch, Steve	Form Letter	
40. Breiding, Joan	Form Letter	
41. Brettillo, Joseph	Form Letter	
42. Brink, Kim F.	Form Letter	
43. Brinkerhoff, Aaron	Form Letter	
44. Britton, Kathyn	Form Letter	
45. Brooker, Catherine	Form Letter	
46. Brown, Daniel	Form Letter	
47. Brown, Jim	Form Letter	
48. Brown, Joel	Form Letter	
49. Brown, Michael	Form Letter	
50. Brown, Steve	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
51. Brumbaugh, Diana	Form Letter	
52. Brussmann, Peter	Form Letter	
53. Burford, Martha	Form Letter	
54. Burk, Joyce	Form Letter	
55. Burns, Robert	See Response	33
56. Burns, Vicki	Form Letter	
57. Camarena, Megan	Form Letter	
58. Campbell, Alicia	Form Letter	
59. Campbell, Tomas	Form Letter	
60. Campbell, Velene	Form Letter	
61. Cant, John	Form Letter	
62. Carnahan, Walt	Form Letter	
63. Carroll, Jacqueline	Form Letter	
64. Carroll, Kathryn	Form Letter	
65. Carter, Marian	Form Letter	
66. Cass, Lorraine	Form Letter	
67. Cassidy, Margaret	Form Letter	
68. Caudill, Rich & Maya	Form Letter	
69. Chacalos, Payton	Form Letter	
70. Chapman, Zoe	Form Letter	
71. Chermak, Douglas	Form Letter	
72. Chichlar, Gerald	Form Letter	
73. Chien, Benny	Form Letter	
74. Christiana, Verna	Form Letter	
75. Christianson, Steve	Form Letter	
76. Clark, Jason	Form Letter	
77. Clark, Sally	Form Letter	
78. Close, Dan	See Response	34
79. Cluster, Mike	Form Letter	
80. Cohen, Howard	Form Letter	
81. Comisar, Gerald	Form Letter	
82. Confectioner, Vira	Form Letter	
83. Conly, Leonard	Form Letter	
84. Conroy, Thomas	Form Letter	
85. Cooper, Richard	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
86. Costa, Francisco	Form Letter	
87. Cottingham, Brian	Form Letter	
88. Counseller, Erik	Form Letter	
89. Cousins, Catharine	Form Letter	
90. Crawford, David	Form Letter	
91. Cunningham, Debra	Form Letter	
92. Dane, William	Form Letter	
93. Dapore, Wendy	Form Letter	
94. Davidson, Davy	Form Letter	
95. Dayton, RuthAnne	Form Letter	
96. De Costanzo, Danielle	Form Letter	
97. Denneen, Bill	Form Letter	
98. Denison, James	See Form Letter Response	
99. Denison, Joyce (June 6, 2002)	9b, 9d, 9h, 9i, 17	12
100. Denison, Michael (June 1, 2002)	9b, 9d, 9h, 9i, 17	13
101. Denison, Richard (June 6, 2002)	9, 9h, 9i, 15, 17	11
102. Dennis, Larry	Form Letter	
103. Desilets, Michelle	Form Letter	
104. Dexter, Ken	Form Letter	
105. Diaz, Israel	Form Letter	
106. Diaz, L.	Form Letter	
107. Diaz, Marisa	Form Letter	
108. Dickinson, Rebecca	Form Letter	
109. Doe, Crosby	Form Letter	
110. Doman, Geoffrey	Form Letter	
111. Domingos, Ananda	Form Letter	
112. Doncaster, Jeane J.	Form Letter	
113. Downing, Steve	Form Letter	
114. Duncan, Mike	Form Letter	
115. Duquette, Thomas	Form Letter	
116. Easter, Margaret	Form Letter	
117. Ecoman, Brett	Form Letter	
118. Edwards, Dylan	Form Letter	
119. Eger, Grace	Form Letter	
120. Emerson, Linda	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
121. Engle, Ned	No Response Required	
122. English, Roger	Form Letter	
123. Ennis, Karen	Form Letter	
124. Epperson, Diane (May 30, 2006)	9b, 9d	9
125. Erwin, Cherie	Form Letter	
126. Evans, Dinda	Form Letter	
127. Evans, James	Form Letter	
128. Fahlgren, Vivian	Form Letter	
129. Falberg, Gregory	Form Letter	
130. Feldman, Mark	Form Letter	
131. Field, Michael	Form Letter	
132. Fiklin, James	Form Letter	
133. Filipelli, DeBorah	Form Letter	
134. Fiore, Mark J.	Form Letter	
135. Fischer, Douglas	Form Letter	
136. Fisk, Linda	Form Letter	
137. Flietner, David	See Response	35
138. Fleming, Alan	Form Letter	
139. Floyd, Kim	Form Letter	
140. Foley, Fran	Form Letter	
141. Ford, Julie C.	Form Letter	
142. Fordice, John	Form Letter	
143. Fortner, Suzanne	Form Letter	
144. Foss, Janice	Form Letter	
145. Foster, Linda	Form Letter	
146. Fowlks, Dan	Form Letter	
147. Frappier, Alexandra	Form Letter	
148. Frasier, Forest	Form Letter	
149. Freedlund, Ali	Form Letter	
150. Frewin, Terry	Form Letter	
151. Frugoli, Greg	Form Letter	
152. Fullam, Peter	See Form Letter Response	
153. Gagomiros, Keith	Form Letter	
154. Galvin, Peter	Form Letter	
155. Gan, Monica	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
156. Garber, Dennis	Form Letter	
157. Garcia, Christine	Form Letter	
158. Gardner, Kyle	Form Letter	
159. Garrels, Sharon	Form Letter	
160. Garrett, Katherine	Form Letter	
161. Garrett, Kelley	Form Letter	
162. Garvin, Michael	Form Letter	
163. Gaul, Ron	See Form Letter Response	
164. Gerratana, Carol	See Form Letter Response	
165. Gibson, James	Form Letter	
166. Gierson, Ellen	Form Letter	
167. Goggins, Alan	Form Letter	
168. Gooch, Nancy	Form Letter	
169. Gottesman, Judith	Form Letter	
170. Gottscho, Andrew	Form Letter	
171. Graham, Kimberley	Form Letter	
172. Grant, Linda	Form Letter	
173. Greenberg, Corinne	Form Letter	
174. Greenblatt, Karl	Form Letter	
175. Gregor, Dorothy	See Form Letter Response	
176. Grenland, Dianne	Form Letter	
177. Griffith, Jeremiah	Form Letter	
178. Grobe, Nicola	Form Letter	
179. Guerreiro, Mike	Form Letter	
180. Hagen, Andrew	Form Letter	
181. Hagler, Douglas	Form Letter	
182. Hall, Robert	Form Letter	
183. Hamilton, Van & Lois	Form Letter	
184. Hampton, Susan	Form Letter	
185. Harkins, Joanne	Form Letter	
186. Harkins, Lynne	See Form Letter Response	
187. Harmon, Ben	Form Letter	
188. Harrington, Sue	Form Letter	
189. Harris, Victoria	Form Letter	
190. Hartwick, Nancy	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
191. Haskins, Bill	Form Letter	
192. Hawthorne, Anne	Form Letter	
193. Hayes, Sara	Form Letter	
194. Healy, Patricia	Form Letter	
195. Hein, Claudia	Form Letter	
196. Heinzig, Dennis	Form Letter	
197. Henry, Lyle	Form Letter	
198. Hensley, Gordon	Form Letter	
199. Hidy, Ross	Form Letter	
200. Hill, Kirsten	Form Letter	
201. Hillery, Karie	Form Letter	
202. Hodges, Herman	Form Letter	
203. Hoffman, Jeff	Form Letter	
204. Hofman, Diana	Form Letter	
205. Holcomb, Susan	Form Letter	
206. Holmes Fatooh, Audrey	See Form Letter Response	
207. Holz, Dennis	Form Letter	
208. Hoon, Daryl	Form Letter	
209. Hopkins, Thomas	Form Letter	
210. Huard, Nicholas	Form Letter	
211. Hubbs, Earl	Form Letter	
212. Huebner, Julie	Form Letter	
213. Hughes, Brendan	Form Letter	
214. Hughes, Nan	Form Letter	
215. Jacobs, David	Form Letter	
216. Jaeger, Diana	Form Letter	
217. Janson-Smith, Toby	Form Letter	
218. Jensen, Nancy	Form Letter	
219. Jessler, Darynne	Form Letter	
220. Johnson, Christina	Form Letter	
221. Johnston, Timothy	Form Letter	
222. Jones, Dayvid	Form Letter	
223. Jones, Kathleen	Form Letter	
224. Junak, Steve	Form Letter	
225. Kahn, Patricia	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
226. Kandel, Cheryl	Form Letter	
227. Karlsson, Kent	Form Letter	
228. Karp, Michael	Form Letter	
229. Kaufman, I. Charles	Form Letter	
230. Kaufman, Kimberly	Form Letter	
231. Kaufman, Murray	Form Letter	
232. Kay, Joni	Form Letter	
233. Kelly, Carol	Form Letter	
234. Kennedy, Arthur	See Form Letter Response	
235. Kiger, Mary Ann	Form Letter	
236. Kimball, Charlotte	Form Letter	
237. Kirk, Keith	Form Letter	
238. Klein, Karin	Form Letter	
239. Klein, Leslie	Form Letter	
240. Klopp, Basey	Form Letter	
241. Klosterman, Peter	Form Letter	
242. Kotte, Merry Brook	Form Letter	
243. Kraemer, Melissa	Form Letter	
244. Krakow, Jessica	Form Letter	
245. Kritzer, Sherry	Form Letter	
246. Kuelper, Carol	Form Letter	
247. Kulenovic, Minka	Form Letter	
248. Kummel, Julie	Form Letter	
249. Kutcher, Celia	See Form Letter Response	
250. Kwan, Mei	Form Letter	
251. Kwinter, Dave	Form Letter	
252. La Brie, Jon	Form Letter	
253. LaBrie, T.M.	Form Letter	
254. Laffey, John Kevin	Form Letter	
255. LaManna, Joseph	Form Letter	
256. Lange, Trent	See Form Letter Response	
257. Lariz, Mondy	Form Letter	
258. Laursen, Patti	Form Letter	
259. Lee, David	Form Letter	
260. Levine, Ross	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
261. Lewis, Tryphena	Form Letter	
262. Lieber, Kurt	Form Letter	
263. Lilly, David	Form Letter	
264. Lin, Stephanie	Form Letter	
265. Linarez, Karen	Form Letter	
266. Linder, Lorin	Form Letter	
267. Linsley, Stephen	Form Letter	
268. Little, Eko	Form Letter	
269. Little, James	Form Letter	
270. Litvak, Jay	Form Letter	
271. Litwin, Julie	Form Letter	
272. Logsdon, Jimi	Form Letter	
273. Lotz, Elizabeth	Form Letter	
274. Lowell, Jacquie	Form Letter	
275. Lynch, Dennis	Form Letter	
276. Lynn, Georgia	Form Letter	
277. Lyons, James	Form Letter	
278. Mack, Callie (July 14, 2006)	3, 9, 9b, 9d, 15, 16, 17	23
279. Mark, Marie	Form Letter	
280. Marshall, Ilona	Form Letter	
281. Marszal, Jeffrey G.	Form Letter	
282. Masarik, Charlotte	Form Letter	
283. Mason, Ken	Form Letter	
284. Matthews, Mark	Form Letter	
285. Maxwell, Jane	See Form Letter Response	
286. Mayer, Norman	Form Letter	
287. McAfee, Stephanie	Form Letter	
288. McClure, Roger & Judith	Form Letter	
289. McGowan, Cathy	Form Letter	
290. McKnight, Shoshanah	Form Letter	
291. McLaughlin, Janet H.	Form Letter	
292. Meier, Robert	Form Letter	
293. Meissner, Gregory	Form Letter	
294. Meril, Rick & Joan	Form Letter	
295. Merilatt, George	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
296. Meyers, M.S.	Form Letter	
297. Miller, Jamie	Form Letter	
298. Miller, Laura	Form Letter	
299. Miller, Lee	Form Letter	
300. Miranda, Lara C.	See Response	36
301. Miranda, Luciana	Form Letter	
302. Mitchel, William	Form Letter	
303. Mitchell, Joyce	Form Letter	
304. Montoliu, Raphael	Form Letter	
305. Morris, Peter	Form Letter	
306. Morris, Todd	Form Letter	
307. Morris, Virginia	Form Letter	
308. Morrow, Mr. & Mrs. Jack L.	Form Letter	
309. Moser, Rich	Form Letter	
310. Mount-Sartor, Joanne	Form Letter	
311. Mundy, Kenneth	Form Letter	
312. Munoz, Jeanne	Form Letter	
313. Munson, Jacob	Form Letter	
314. Murphy, J.	See Form Letter Response	
315. Murphy, Virginia G.	Form Letter	
316. Napier, Sabrina	Form Letter	
317. Neuhauser, Alice	Form Letter	
318. Nguyen, Thanh-Lam	Form Letter	
319. Nicodemus, Sharon	Form Letter	
320. Nogare, John	Form Letter	
321. Nogare, Susan	Form Letter	
322. Novotny, Michael & Sally	Form Letter	
323. O'Donnell, Kelly	Form Letter	
324. Ogella, Edith	Form Letter	
325. Olander, Chris	Form Letter	
326. O'Leary, Cathy	Form Letter	
327. Olin, Christopher	Form Letter	
328. Olin, Milton	Form Letter	
329. Olson, Tarin	Form Letter	
330. Omura, Kathy	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
331. Orenstein, Susan E.	Form Letter	
332. O'Shea, Denis (July 11, 2006)	9, 9b	22
333. Painter, Elizabeth	See Form Letter Response	
334. Pan, Pinky Jain	Form Letter	
335. Parker, Angus M.	Form Letter	
336. Parker, Reece	Form Letter	
337. Parker, Ronald C.	Form Letter	
338. Parrish, Larry	Form Letter	
339. Patitz, Tatjana	Form Letter	
340. Patton, Carol	Form Letter	
341. Peer, William	Form Letter	
342. Pellicani, Andrea	Form Letter	
343. Penner, Marsha	See Form Letter Response	
344. Petersen, John	Form Letter	
345. Peterson, Janice	Form Letter	
346. Peterson, Morgan	Form Letter	
347. Pewthers, Cale	Form Letter	
348. Pickering, Steve	Form Letter	
349. Pillsbury, Cheri	See Form Letter Response	
350. Polesky, Alice	Form Letter	
351. Pomies, Jackie	Form Letter	
352. Preston, Mar	Form Letter	
353. Price, Lynn	Form Letter	
354. Prola, Jim & Diana	Form Letter	
355. Proteau, Mary	Form Letter	
356. Pruitt, Richard	Form Letter	
357. Puga, Shirley	Form Letter	
358. Qualls, Mike	Form Letter	
359. Quong, Angela	Form Letter	
360. Rabens, Robin	Form Letter	
361. Ratcliffe, John W. & Joanne E.	Form Letter	
362. Raya, Art & Sharon	Form Letter	
363. Raymond, MariaElena	See Form Letter Response	
364. Reed, Cynthia	Form Letter	
365. Reed, Kristin	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
366. Reed, Robert R.	Form Letter	
367. Reinberg, Don	Form Letter	
368. Remington, Stephanie	Form Letter	
369. Reyes, Fran	Form Letter	
370. Riddell, John	Form Letter	
371. Riley, Bill	Form Letter	
372. Ritter, Amy	Form Letter	
373. Robinson, Debra K.	Form Letter	
374. Robinson, Richard	Form Letter	
375. Robison, Anne	Form Letter	
376. Rocco, David	Form Letter	
377. Rochford, Dan	Form Letter	
378. Rojas, Teresa	Form Letter	
379. Root, Charlene	Form Letter	
380. Roper, Erik	Form Letter	
381. Rose, Barbara R.	Form Letter	
382. Rosen, Z'ava	Form Letter	
383. Rousselot, Patrik	Form Letter	
384. Ruane, Catherine	Form Letter	
385. Rubin, Gene & Lorraine	Form Letter	
386. Rubin, Michael	Form Letter	
387. Russell, James	Form Letter	
388. Russell, Phyllis	Form Letter	
389. Sacco, Thomas	Form Letter	
390. Sahagun-Norte, Yolanda M.	Form Letter	
391. Salzman, Richard	Form Letter	
392. Saufley, Harold	Form Letter	
393. Saverio, R.	Form Letter	
394. Schlecker, Rose	Form Letter	
395. Schlegel, Ed	Form Letter	
396. Schleimer, Sylvia	Form Letter	
397. Schmitt, Richard	Form Letter	
398. Schneider, Anna	Form Letter	
399. Scholl, Florence	Form Letter	
400. Schuett, Greg	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
401. Schulte, Dawne	Form Letter	
402. Schwick, Keplin	Form Letter	
403. Scott, Joan	Form Letter	
404. Scully, Patricia	Form Letter	
405. Senour, Jon C.	Form Letter	
406. Shapira, Susan	Form Letter	
407. Shapiro, Susan	Form Letter	
408. Shemwell, Misty	Form Letter	
409. Sheppard, Jacob	Form Letter	
410. Shields, Kelli	Form Letter	
411. Siegel, Kassie	Form Letter	
412. Silan, Sheila	Form Letter	
413. Silver, Jack	Form Letter	
414. Simon, Philip	Form Letter	
415. Simons, Anita	Form Letter	
416. Smallwood, Spencer	Form Letter	
417. Smith, Adam	Form Letter	
418. Smith, Brian	Form Letter	
419. Smith, Dmitra	Form Letter	
420. Snyder, Renee	Form Letter	
421. Sondrini, Dennis O.	Form Letter	
422. Sonoda, Charlotte	Form Letter	
423. Sonoquie, Mo	Form Letter	
424. Sorenson, John F.	Form Letter	
425. Spenger, Constance	Form Letter	
426. Stadler, Scott	Form Letter	
427. Starks, Les	Form Letter	
428. Stearns, Geoffrey	Form Letter	
429. Steele, Mary	Form Letter	
430. Steinbach, Ann	See Form Letter Response	
431. Steiner, John	Form Letter	
432. Stephens, Josh	Form Letter	
433. Sternberg, Justin	Form Letter	
434. Stevens, Thomas N.	Form Letter	
435. Stewart, Dana L.	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
436. Stewart, Glenn R.	See Form Letter Response	
437. Stillman, Jon	Form Letter	
438. Stoilov, Luben	Form Letter	
439. Stovin, Ed	See Response	37
440. Stowe, David	Form Letter	
441. Strauss, Howard	Form Letter	
442. Strickler, Jean	Form Letter	
443. Stringer, Lewis	Form Letter	
444. Strobel, Jeanine	Form Letter	
445. Stromberg, Mark	Form Letter	
446. Stuckey, Marci	Form Letter	
447. Suzuki, Mika	Form Letter	
448. Sweel, Greg	Form Letter	
449. Swift, Kevin	See Response	38
450. Taber, Lucile J.	Form Letter	
451. Taiz, Lee	Form Letter	
452. Talamo, Dave	Form Letter	
453. Tankenson, Ethel	Form Letter	
454. Thomas, Dennis	Form Letter	
455. Thomas, Joseph	Form Letter	
456. Thomas, Kevin	Form Letter	
457. Thomas, Marilyn	Form Letter	
458. Thomas, William	Form Letter	
459. Thorburn, Linda	Form Letter	
460. Tiarks, Daniel	Form Letter	
461. Tisdale, Donna (May 24, 2006)		8
462. Tisdale, Donna (July 16, 2006)	1, 3, 9, 9b, 9d, 12c, 14a, 16b, 17, 18e, 18g	28
463. Tomczyszyn, Michael	Form Letter	
464. Tomlinson, Mike	Form Letter	
465. Torgan, Burt F.	Form Letter	
466. Torres, Luz	Form Letter	
467. Trapp, Gene R.	Form Letter	
468. Travis, Annabelle	Form Letter	
469. Triplett, Tia	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
470. Turek, Gabriella	Form Letter	
471. Turner, Shirley	Form Letter	
472. Tyler, Steve & Jill	Form Letter	
473. Vaden, Marcia	Form Letter	
474. Van Bloemen, Dona	Form Letter	
475. Vandersloot, Jan D.	Form Letter	
476. Vandragt, Brady	Form Letter	
477. VanVoorhis, David	Form Letter	
478. Varga, John L.	Form Letter	
479. Varvas, Jason	Form Letter	
480. Velyvis, Stephen	Form Letter	
481. Voss, Randall	Form Letter	
482. Warenycia, Dee	Form Letter	
483. Warenycia, Paul	Form Letter	
484. Watt, Mark	Form Letter	
485. Watts-Rosenfeld, Susan	Form Letter	
486. Weatherman, John	Form Letter	
487. Weaver, Judy	Form Letter	
488. Weaver, Kenneth	Form Letter	
489. Weeden, Noreen	See Form Letter Response	
490. Weikel, Wendy	Form Letter	
491. Weinberg, Amanda	Form Letter	
492. Weisz, Russell	Form Letter	
493. Welsch, Bill	See Response	39
494. Welsh, Deborah	Form Letter	
495. Werner, Scott	Form Letter	
496. Werninghaus, Karla	Form Letter	
497. Weyer, Linda	Form Letter	
498. White, Kat	Form Letter	
499. White, Michael	Form Letter	
500. Whitnah, Claudia M.	Form Letter	
501. Wikle, Victoria	Form Letter	
502. Wild, Kathryn	See Form Letter Response	
503. Wilder, Jenny	Form Letter	
504. Wiley, Carol	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
505. Williams, Margie	Form Letter	
506. Williams, Mark	Form Letter	
507. Williams, Nicholas	Form Letter	
508. Wilson, Mary Ann	Form Letter	
509. Winslow, Lynda	Form Letter	
510. WinterSun, P-A	Form Letter	
511. Wisti, Mike	Form Letter	
512. Wolf, Rachel	Form Letter	
513. Wolfe, Gerry & Vicki	Form Letter	
514. Wood, Wendell	Form Letter	
515. Woodcock, Charlene	See Form Letter Response	
516. Woodcock, William E.	Form Letter	
517. Woods, James L.	Form Letter	
518. Worthy, Crista	Form Letter	
519. Wright, Pam	Form Letter	
520. Wright, Sharon	Form Letter	
521. Wuhrmann, Karin	Form Letter	
522. York, Mark	Form Letter	
523. Youhas, Sara	Form Letter	
524. Yuen, Lois	Form Letter	
525. Yurkovsky, Alexandra	Form Letter	
526. Zarkowski, De Ann	Form Letter	
527. Zivian, Anna	Form Letter	
528. Zukoski, Katie	Form Letter	



Dan Skopec
Acting Secretary
Cal/EPA

Letter 1



Department of Toxic Substances Control

Maureen F. Gorsen, Director
5796 Corporate Avenue
Cypress, California 90630



Arnold Schwarzenegger
Governor

May 1, 2006

Mr. Jurg Heuberger
Planning & Development
Services Director
801 Main Street
El Centro, California 92243

RECEIVED

MAY 08 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE U.S. GYPSUM
COMPANY EXPANSION/MODERNIZATION PROJECT (SCH# 2001121133)

Dear Mr. Heuberger:

The Department of Toxic Substances Control (DTSC) has received your submitted EIR document for the above-mentioned project. The following project description is stated in your document: "The U.S. Gypsum facilities are located in Western Imperial County, consisting of: (a) Plaster City Plant, which produces wallboard and related gypsum products, located 18 miles west of the City of El Centro, (b) Water Supply, consisting of an 8-mile water supply line extending from a well field located in the vicinity of the community of Ocotillo, and (c) the Plaster City Quarry, from which gypsum materials are quarried, located approximately 26 mile north of the Plaster City Plant. The applicant proposes to expand and upgrade facilities at the Plaster City Plant to increase wallboard production capacity with related increases in water supply." Based on the review of the submitted EIR document DTSC has comments as follow:

1. The draft EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If hazardous materials or wastes are/were stored at the site, further studies should be carried out to delineate the possible nature and extent of potential contamination, and the potential threat to public health and/or the environment should be evaluated. It may be necessary to determine if an expedited response action is required

1-1

to reduce existing or potential threats to public health or the environment. If no immediate threat exists, the final remedy should be implemented in compliance with state regulations and policies.

1-1
Con't.

The draft EIR states: "The Plaster City Plant includes manufacturing areas, maintenance and fueling areas, shops, and could include a co-generation facility for generating electricity from a turbine. These components require use and storage of fuels, oils and other liquids that are classified as hazardous substances or materials."

2. All environmental investigations, sampling and/or remediation should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous waste cleanup. The findings and sampling results from the subsequent report should be clearly summarized in the EIR. Proper investigation, sampling and remedial actions, if necessary, should also be conducted at the site prior to the new development or any construction, and overseen by a regulatory agency.

1-2

3. If any property adjacent to the project site is contaminated with hazardous chemicals, and if the proposed project is within 2,000 feet from a contaminated site, then the proposed development may fall within the "Border Zone of a Contaminated Property." Appropriate precautions should be taken prior to construction if the proposed project is within a "Border Zone Property."

1-3

4. Since building structures, asphalt or concrete-paved surface areas or other structures are planned to be demolished, an investigation as proposed should be conducted for the presence of lead-based paints or products, mercury and asbestos containing materials (ACMs). Since ACMs have been identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations, policies, and laws.

1-4

The draft EIR states: "The existing operation also has a water pipeline approximately eight and one-half miles long. This pipeline contains non-friable asbestos materials...USG's Proposed Action includes replacing the current 8" line with a new 10" line and removing and disposing of the 8" line."

5. The project construction may require soil excavation and soil filling in certain areas. Appropriate sampling is required prior to disposal of the excavated soil. If the soil is contaminated, properly dispose of it rather than placing it in another location. Land Disposal Restrictions (LDRs) may be applicable to these soils.

1-5

- Also, if the project proposes to import soil to backfill the areas excavated, proper sampling should be conducted to make sure that the imported soil is free of contamination. **1-5
Con't.**
6. If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). **1-6**
7. If it is determined that hazardous wastes are or will be generated and the wastes are (a) stored in tanks or containers for more than ninety days, (b) treated onsite, or (c) disposed of onsite, then a permit from DTSC may be required. If so, the facility should contact DTSC at (818) 551-2171 to initiate pre application discussions and determine the permitting process applicable to the facility. **1-7**
8. If it is determined that hazardous wastes will be generated, the facility should obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. **1-8**
9. Certain hazardous waste treatment processes may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA. **1-9**
10. If the project plans include discharging wastewater to a storm drain, you may be required to obtain an NPDES permit from the overseeing Regional Water Quality Control Board (RWQCB). **1-10**
11. If during construction/demolition of the project, soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. If it is determined that contaminated soil and/or groundwater exist, the EIR should identify how any required investigation and/or remediation will be conducted, and the appropriate government agency to provide regulatory oversight. **1-11**

Mr. Jurg Heuberger
May 1, 2006
Page 4

If you have any questions regarding this letter, please contact me at (714) 484-5461 or Mr. Joseph Kaslowski, Project Manager at (714) 484-5471 or by e-mail at jkaslowski@dtsc.ca.gov.

Sincerely,



Greg Holmes
Unit Chief
Southern California Cleanup Operations Branch - Cypress Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

CEQA # 1388

Letter 1
Department of Toxic Substances Control, May 1, 2006

Comment 1-1

Response: Comment noted. The comment letter does not reflect that the project being analyzed is an existing facility and that this analysis follows construction and operation. The reader should refer to Section 1.1.3.1, page 1.0-8, Volume 1 of the Draft EIR/EIS. Equipment fuels were stored on the construction site during construction activities associated with Plant expansion. Soils near the storage areas were tested for contamination and remediated, if necessary. The current condition of the soils at the Plant and Quarry sites do not pose a threat to the public health or the environment, and no further investigation and/or remediation of the soils is required at this time.

It is unknown where the construction fuels were specifically stored. It is believed that they were kept to the west end of the Plant in the construction laydown area. Fuels were kept onsite through completion of the expansion, 1999 to 2000.

As discussed in Section 3.10.3.2 of the Draft EIR/EIS (page 3.10-6), USG has and maintains a Spill Prevention Control and Countermeasures Plan (SPCC) that satisfies all the criteria of 40 C.F.R. § 112.1, *et seq.* The mitigation measures identified in the Draft EIR/EIS will ensure that the potential impacts associated with use and storage of hazardous materials at the Plant and the Quarry will be less than significant.

The Plant maintains a Spill Prevention Control and Countermeasure Plan (SPCC) that identifies storage areas for fuels, oils and other liquids that are classified as hazardous substances or materials. The SPCC indicates the potential flow pattern of a spilled material and the nearest storm drain/outfall that would be infiltrated should the containment measures fail. The Plant also maintains a Hazardous Response Program detailing the procedures to follow should a spill take place. Should a release take place, remediation will follow the procedures required by all applicable state and federal regulations and policies.

The Regional Water Quality Control Board is the governmental agency that regulates the SPCC. The SPCC identifies the location of hazardous material within the facility, which employees are properly trained to handle a spill of material, and also the protocol to handle a spill.

USG will comply with the law on reporting spills per applicable requirements. There is no known threat to environment/public safety. The SPCC plan will be

modified to include co-generation when and if it is installed. No further studies are needed since there has been no indication of contamination.

Comment 1-2:

Response: Comment noted. See Response to Comment 1-1.

Comment 1-3:

Response: Comment noted. Property adjacent to the site is owned/managed by the Bureau of Land Management and is not known to have had any development or process that would store or generate hazardous materials.

Comment 1-4:

Response: An asbestos containing material and lead based paint survey was conducted on the structures to be demolished. Any necessary remediation was performed in compliance with California environmental regulations, policies, and laws. Comment regarding 8" pipeline noted and is addressed, Draft EIR/EIS page 3.10-7. With implementation of Mitigation Measure 3.10-2, the potential impacts will be less than significant.

The proposed replacement of the 8" water pipeline with a new 10" pipeline has not been enacted, and therefore no remediation has been required.

The installation of Line #3 occurred on "virgin" land minus the pre-existing Midland Warehouse. The core samples taken before construction of Line #3 were reviewed and did not indicate contamination of the soil.

Comment 1-5:

Response: All soil excavated from the site was used as backfill for other areas of the site. No new soil was brought to the site from other locations, and no excavated soil from the site was taken to other locations.

Comment 1-6:

Response: Noted (mentioned in Draft EIR/EIS on page 3.10-5 and 6).

Comment 1-7:

Response: Comment noted.

Comment 1-8:

Response: Comment noted, The facility's U.S. Environmental Protection Agency Identification Number is CAD982004962.

Comment 1-9:

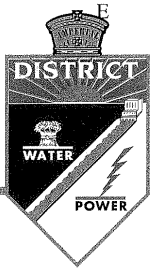
Response: Comment noted. No treatment of hazardous waste occurs on-site.

Comment 1-10:

Response: Comment noted. No water is discharged to a storm drain.

Comment 1-11:

Response: Comment noted. No groundwater contamination was found or was suspected during construction/demolition. Should contaminated soil/groundwater be encountered all proper investigation and remediation procedures will be followed.



Letter 2

IMPERIAL IRRIGATION DISTRICT

OPERATING HEADQUARTERS • P. O. BOX 937 • IMPERIAL, CALIFORNIA 92251

May 12, 2006

Mr. Jurg Heuberger, Planning Director
Imperial County Planning and Development Services
801 Main Street
El Centro, CA 92243

Subject: Notice of Availability U.S. Gypsum (USG) Modernization /Expansion Project
Draft Environmental Impact Report (EIR)/Environmental Impact Statement
(SCH #2001121133)

Dear Mr. Heuberger:

The Imperial Irrigation District's (IID) Water Engineering Section has reviewed the subject matter. The IID has the following comments:

- 1) The proposed action and alternatives (pages 2.0-70 to 2.0-77) indicated that USG would either pursue partial use or full use of water from IID. Partial use will entail mixing IID water with groundwater from Ocotillo. Full use will depend on water Plant operations, having all water supplied by IID under a water service agreement with USG. 2-1
- 2) The IID Board of Directors approved Resolution No. 8-2006, water service agreement providing USG water from the **Westside Main Canal** not to exceed 1,000-acre-ft per year. This resolution was passed on April 4, 2006. 2-2

Thank you for the opportunity to review this matter. If you have any questions regarding these comments, please contact me at 339-9110.

Sincerely,

Fred Valera
Planner

FV: cr

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MAY 30 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Letter 2
Imperial Irrigation District, May 12, 2006

Comment 2-1:

Response: Comment noted.

Comment 2-2:

Response: Comment noted. See General Response 4.3.4.



CENTER FOR BIOLOGICAL DIVERSITY

Because life is good • www.biologicaldiversity.org

May 16, 2006

Jurg Heuberger
Director, Imperial County, Planning and Development Services
801 Main Street
El Centro CA 92243

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

MAY 22 2006

RECEIVED

Vicki Wood
Field Office Manager, BLM El Centro Field Office
1661 S. 4th Street
El Centro CA 92243

Re: draft environmental impact report/environmental impact statement (EIR/EIS), U.S. Gypsum, Plaster City, Imperial County.

Jurg and Vicki,

We are very concerned that neither the county nor BLM included the extensive comments provided by conservation groups during the scoping phase of this project in the draft EIR/EIS, and did not address the serious environmental concerns raised by the conservation groups. The Center has 23,000 members, including many in Imperial County.

3-1

We see this as a violation of federal and state law. The draft EIR/EIS should be revised to address these comments and re-circulated for public review and comment.

The Center is very concerned about US Gypsum's proposal, especially the harmful impacts it would have on Peninsular bighorn survival and recovery, water resources, and other natural values in the area.

3-2

We request an extension of the comment period until July 31. Please inform us as soon as possible whether this reasonable request is honored.

3-3

Please give me a call if you want to discuss our concerns in more detail.

Thanks,

Daniel R. Patterson

cc: Steve Borchard, BLM CDCA Manager, Moreno Valley CA; US Rep. Bob Filner

Letter 3
Center for Biological Diversity, May 16, 2006

Comment 3-1:

Response: A public scoping meeting was held by the County on January 9, 2003. In addition, the BLM held a public scoping meeting on May 22, 2002. Written and oral comments received during these meetings were reviewed and considered by both the County and BLM in the preparation of the Draft EIR/EIS. Among other things, a list of issues to be evaluated in the Draft EIR/EIS was developed as a result of the scoping process. See page S-2 of the Draft EIR/EIS.

Lead agencies are not required to prepare written responses to comments presented during the scoping process. Moreover, there is no legal requirement that written materials submitted to the lead agencies during the scoping process be included in the Draft EIR/EIS. Nonetheless, a transcript of the January 9, 2002 scoping meeting and written materials presented to the County during the scoping process are presented in the Draft EIR/EIS, Volume II, Appendix A-3 Scoping Materials. Additional materials submitted to the BLM during the federal scoping process are included in Appendix D of the Final EIR/EIS.

Comment 3-2:

Response: Comment noted. The potential impacts of the Proposed Action on Peninsular bighorn sheep, water resources, and other natural resources in the area were evaluated in the Draft EIR/EIS. Regarding Peninsular bighorn sheep, see General Response 4.3.1. Regarding water resources, see General Responses 4.3.4, 4.3.5, 4.3.6, 4.3.7, and 4.3.8, and Letters 26, 27, 28-1 through 21, 29-25 through 29-141, and 31.

Comment 3-3:

Response: Initially comments on the Draft EIR/EIS were due to the County on June 11, 2006 and to BLM on June 20, 2006. In response to this commenters request as well as the request of others the County and BLM extended the public comment period to July 17, 2006.

PUBLIC UTILITIES COMMISSION

320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013



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MAY 25 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

May 22, 2006

Jurg Heuberger
Imperial County
801 Main Street
Imperial, CA 92243

Dear Mr. Heuberger:

Re: SCH# 2001121133; U.S. Gypsum Modernization/Expansion Project

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the Union Pacific Railroad Company right-of-way be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way.

4-1

Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way.

4-2

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the County.

Please advise us on the status of the project. If you have any questions in this matter, please contact me at (213) 576-7078 or at rxm@cpuc.ca.gov.

Sincerely,

Rosa Muñoz, PE
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection & Safety Division

C: Richard Gonzales, UP

Letter 4
Public Utilities Commission, May 22, 2006

Comment 4-1:

Response: A traffic analysis was prepared for the Proposed Action See Draft EIR/EIS Section 3.11, and Volume II, Appendix G. As discussed in the Draft EIR/EIS, the potential impact of the Proposed Action on the traffic crossing the railroad at the Dunaway Road crossing will be less than significant. One train per day passes along the railroad tracks, and this is not expected to increase as a result of the Plant expansion; however, the train will consist of more cars at times. Regarding rail corridor safety, see Response to Comment 4-2.

Comment 4-2:

Response: The length of Union Pacific Railroad tracks running east-west through the applicant's property and behind the Plant has limited rail traffic. As a part of the Plant expansion, the tracks have been relocated approximately 550 feet south of the former centerline. Required rainwater control basins separate the majority of the Plant from the railroad tracks. These basins are of sufficient depth to discourage mobile equipment and pedestrian traffic from nearing the tracks. In addition, a barbed wire topped chain link fence separates the Plant from the railroad tracks. The only break in the fence is a 30-foot access way to allow mobile equipment access to the Inert Material Storage Area for recycling purposes. All mobile equipment is directed to stop before crossing the railroad tracks and required Public Utilities Commission (PUC) signs are posted.



Letter 5

STATE OF CALIFORNIA

Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Arnold Schwarzenegger
Governor

Sean Walsh
Director

May 24, 2006

Jurg Heuberger
Imperial County
801 Main Street
El Centro, CA 92243

Subject: U.S. Gypsum Modernization/Expansion Project
SCH#: 2001121133

Dear Jurg Heuberger:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on May 22, 2006, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

5-1

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

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JUN 05 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

5.0-35

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044

January 21, 2008

TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

U.S. Gypsum Final EIR/EIS

**Document Details Report
State Clearinghouse Data Base**

SCH# 2001121133
Project Title U.S. Gypsum Modernization/Expansion Project
Lead Agency Imperial County Planning Department

Type EIR Draft EIR

Description The U.S. Gypsum facilities are located in Western Imperial County, consisting of: (a) Plaster City Plant, which produces wallboard and related gypsum products, located 18 miles west of the City of El Centro; (b) water supply, consisting of an 8-mile water supply line extending from a well field located in the vicinity of the community of Ocotillo; and (c) the Plaster City Quarry, from which gypsum materials are quarried, located approximately 26 miles north of the Plaster City Plant. The applicant proposes to expand and upgrade facilities at the Plaster City Plant to increase wallboard production capacity with related increases in water supply.

Lead Agency Contact

Name Jurg Heuberger
Agency Imperial County
Phone (760) 482-4236 **Fax**
email jurgheuberger@imperialcounty.net
Address 801 Main Street
City El Centro **State** CA **Zip** 92243

Project Location

County Imperial
City El Centro
Region
Cross Streets Just north of I-8

Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways I-8
Airports
Railways UPRR
Waterways
Schools
Land Use Portions of Quarry are located on mining claims on Federal Public lands administered by the BLM.
Z: Plant Site - M-3 (Heavy Industrial)
Water wells - RI-L40

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Cumulative Effects; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Growth Inducing; Landuse; Minerals; Noise; Social; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife

Reviewing Agencies Resources Agency; Regional Water Quality Control Board, Region 7; Department of Parks and Recreation; Native American Heritage Commission; Public Utilities Commission; Office of Historic Preservation; Department of Fish and Game, Region 6; Department of Water Resources; Department of Conservation; California Highway Patrol; Caltrans, District 11; Air Resources Board, Major Industrial Projects; Department of Toxic Substances Control; State Water Resources Control Board, Division of Water Rights

Date Received 04/07/2006 **Start of Review** 04/07/2006 **End of Review** 05/22/2006



Dan Skopec
Acting Secretary
Cal/EPA



Department of Toxic Substances Control

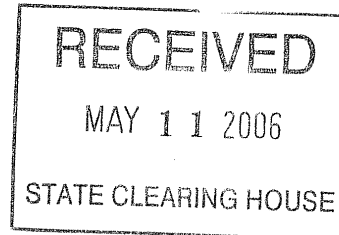
Maureen F. Gorsen, Director
5796 Corporate Avenue
Cypress, California 90630



Arnold Schwarzenegger
Governor

May 1, 2006

Mr. Jurg Heuberger
Planning & Development
Services Director
801 Main Street
El Centro, California 92243



clear
5-22-06
e

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE U.S. GYPSUM COMPANY EXPANSION/MODERNIZATION PROJECT (SCH# 2001121133)

Dear Mr. Heuberger:

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Also, if the project proposes to import soil to backfill the areas excavated, proper sampling should be conducted to make sure that the imported soil is free of contamination.

6. If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5).
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Mr. Jurg Heuberger
May 1, 2006
Page 4

If you have any questions regarding this letter, please contact me at (714) 484-5461 or Mr. Joseph Kaslowski, Project Manager at (714) 484-5471 or by e-mail at jkaslowski@dtsc.ca.gov.

Sincerely,



Greg Holmes
Unit Chief
Southern California Cleanup Operations Branch - Cypress Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

CEQA # 1388

Letter 5
State Clearinghouse, May 24, 2006

Comment 5-1:

Response: Comment noted. The Department of Toxic Substances Control comment letter dated May 1, 2006 and included as an enclosure appears separately as Letter 1 of the responses.

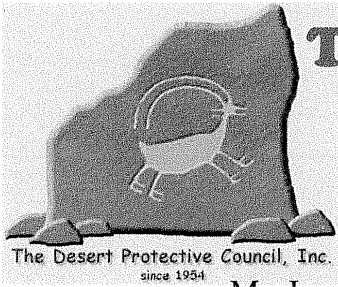
The Desert Protective Council, Inc.

P. O. Box 3635, San Diego, California 92163-1635

www.dpcinc.org

Terry Weiner, Imperial County Projects and Conservation Coordinator

terryweiner@sbcglobal.net, (619) 342-5524



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- LEONARD VINCENT
Professor of Biology
- HOWARD WILSHIRE
Geologist

Mr. Jurg Heuberger, AIC, CEP, CBO
Imperial County Planning and Development Service
801 Main Street
El Centro CA 92243
May 24, 2006

RE: U.S. Gypsum Modernization/Expansion Project Draft Environmental Impact Report/Environmental Impact Statement (SCH #20001121133)

Dear Mr. Heuberger,


I am writing today to protest the lack of inclusion in the current US Gypsum EIR/EIS of the Desert Protective Council's Scoping Comments on the Notice of Preparation (NOP) of the Joint Environmental Impact Report for U.S. Gypsum Company, submitted to your office on February 20, 2002. While the inclusion of Scoping comments in a final document is not legally mandated, it is customary for them to be included in the final document, at least in the appendices of the EIR/EIS.

6-1

The Desert Protective Council has received neither a hard copy, nor a compact disc of the current EIS/EIR. As one of the groups who submitted scoping comments on this EIS/EIR, we have standing and should have received a copy of this document for our review and comments. Since we have not received one, we hereby request an extension of the current comment deadline from June 11th 2006. We request that the comment deadline be extended 60 days from the postmarked date of the mailing of the CD to the Desert Protective Council.

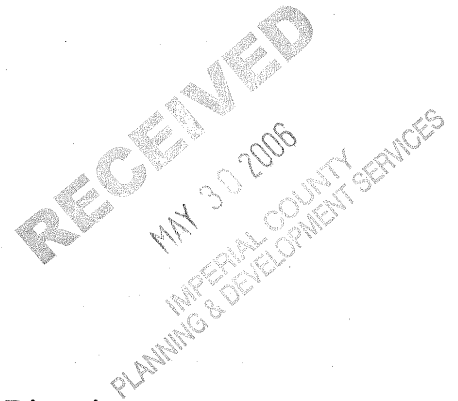
6-2

Thank you very much for your timely consideration of this important issue. I look forward to hearing from you on your intention to extend the US Gypsum comment deadline for 60 days.

Sincerely,

 Ms. Terry Weiner
 Imperial County Projects and Conservation Coordinator

(619) 543-0757
 (619) 342-5524

C.c. Vicki Wood, Field Office Manager, BLM El Centro
 Lisa Belenky, Attorney-at-Law, Center for Biological Diversity



The Mission of the Desert Protective Council, Inc. is to safeguard for sustainable use by this and succeeding generations those desert areas of Southern California that are of unique or significant scenic, scientific, historical, spiritual, and recreational value; and to educate both children and adults to a better understanding of the desert, in order that the objectives of the corporation may be attained.

Letter 6
The Desert Protective Council, Inc., May 24, 2006

Comment 6-1:

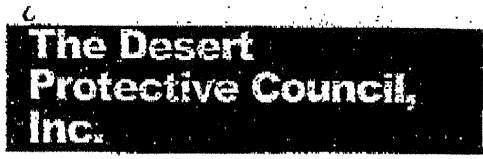
Response: See Response to Comment 3-1.

Comment 6-2

Response: The comment period for the Draft EIR/EIS was extended by the County and BLM Lead Agency to July 17, 2006. A copy of the Draft EIR/EIS was provided to the commenter.

Letter 7

P.O. Box 3635
San Diego, CA 92163
(619) 543-0757
FAX #



Fax

To: MR. JURG HEUBERGE From: Terry Weiner

Fax: (760) 353-8338 Pages: 1 (ONE)

Phone: (760) 482-4236 Date: MAY 24, 2006

Re: US GYPSUM EIS cc: BLM EL CENTRO
SCH # 2001121133

Urgent For Review Please Comment Please Reply Please Recycle

• Comments:

Mr. Heuberger:

I am writing to request a copy of the U.S. Gypsum Modernization/Expansion Project Draft Environmental Impact Report/Environmental Impact Statement (SCH #20001121133).

7-1

As one of the environmental groups which contributed Scoping Comments on the Notice of Preparation (NOP) of a Joint Environmental Impact Report for U.S. Gypsum Company in February 2002, under the County's extended deadline for the project, we have standing and we should have received a copy of the current EIR/EIS. As a result of not having received the document, we are hereby requesting an extension of the comment period for 60 days from the postmarked date of the mailing of the U.S. Gypsum CD to the Desert Protective Council P.O. Box 3635 San Diego CA.92163, Attention: Ms Terry Weiner, Imperial County Projects Coordinator.

7-2

Thank you very much for your attention to this.

RECEIVED
2006 MAY 25 A 10:51
OFFICE OF THE COUNTY COUNSEL
COUNTY OF IMPERIAL

Sincerely,
Terry Weiner

Letter 7
The Desert Protective Council, Inc., May 24, 2006

Comment 7-1:

Response: See Response to Comment 6-2.

Comment 7-2:

Response: See Response to Comment 6-2.

Letter 8

Rosa Soto

From: Jurg Heuberger
Sent: Tuesday, June 06, 2006 2:26 PM
To: Dave Brown
Cc: Malcolm Weiss; 'Rosa Soto '; joanneyeager@imperialcounty.net
Subject: FW: US Gypsum Draft EIR/EIS

Fyi

From: donnatisdale [mailto:donnatisdale@hughes.net]
Sent: Friday, May 26, 2006 10:08 AM
To: Jurg Heuberger
Cc: lself@blm.ca.gov
Subject: US Gypsum Draft EIR/EIS

Mr. Hueberger,

I am requesting acknowledgement that my previous message, copied below and sent May 24 was received by you and that I will be getting a timely response. Thank you.

Donna Tisdale

REQUEST FOR EXTENSION OF COMMENT DEADLINE FOR US GYPSUM DRAFT EIR/EIS

Dear Mr. Heuberger,

Please consider this an official request to, at a minimum, extend the comment deadline for the US Gypsum Draft EIR/EIS (April 2006) by 60 to 90 days. Or, more preferably, extend the deadline until missing items are included and the amended document recirculated for review.

8-1

It appears that critical information, which should be made available to the public for full and proper review and comment, is missing from the Draft EIR/EIS document.

During review, I noticed the following documents are alluded to but cannot be located:

- Sierra Club comment letter for County scoping meeting held 1-9-02 (table of contents for exhibits was included but not the scoping letter itself).
Transcripts of the separate BLM Scoping meeting (reportedly held on May 22, 2002 at the Board of Supervisors' chambers).
BLM scoping comment letters.

8-2

I have reviewed numerous documents of this type and it is customary, perhaps mandatory, to include transcripts of public meetings and all the public comments.

Since this document is court -ordered, and needs to comply with NEPA and CEQA regulations, I would suggest that the comment deadline be extended until the missing documents are added to the Draft EIR/EIS and it is recirculated to the public for review and comment.

8-3

I am also requesting a hard copy of the document as it is physically difficult for me to navigate back and forth on a CD due to the fact that I am slowly recovering from tendon repair on my right elbow. It is also hard to read some of the small print, which appears blurred, and to review the photos and maps sideways on the computer screen.

8-4

Please advise me of your response to my request in writing as soon as possible, and add me to the distribution list for this project. Thank you. My contact information is:

8-4
Con't.

Donna Tisdale
donnatisdale@hughes.net
619-766-4170 ph
619-766-4922 fax
P.O. Box 1275
Boulevard, CA 91905

Letter 8
Donna Tisdale, May 26, 2006

Comment 8-1:

Response: The comment period for the Draft EIR/EIS was extended by the County and BLM to July 17, 2006. See also General Response 4.3.13 (Recirculation).

Comment 8-2:

Response: See Response to Comment 3-1.

Comment 8-3:

Response: See Response to Comment 8-1, above.

Comment 8-4:

Response: A copy of the Draft EIR/EIS was provided to the commenter via a letter dated June 2, 2006.

Letter 9

Rosa Soto

From: Jurg Heuberger
Sent: Tuesday, June 06, 2006 2:21 PM
To: Dave Brown
Cc: Malcolm Weiss; 'Rosa Soto '; 'Darrellgardner (darrellgardner@imperialcounty.net)'; joanneyeager@imperialcounty.net
Subject: FW: U.S. Gypsum Draft EIR/EIS

-----Original Message-----

From: Diane Epperson [mailto:editorz@inreach.com]
Sent: Tuesday, May 30, 2006 9:37 AM
To: Jurg Heuberger
Subject: U.S. Gypsum Draft EIR/EIS

30 May 2006

Jurg Heuberger, Planning Director
Imperial County Planning Department
939 Main St., Suite B-1
El Centro, CA 92243

Re: U.S. Gypsum Expansion/Modernization Project Draft EIR/EIS

Dear Mr. Heuberger,

I have just reviewed the April 2006 draft of the Environmental Impact Report/Environmental Impact Statement regarding U.S. Gypsum's expansion and modernization of the Plaster City plant. As a resident of Ocotillo, I am gravely concerned about the company's proposal to more than double the amount of water they already pump from our EPA-designated sole-source aquifer.

In the 1970s, Imperial County attempted to halt or limit the export of water from the Ocotillo/Coyote Wells basin to Mexico because of concerns regarding overdraft of the aquifer and degradation of water quality. Where is that concern now, considering that U.S. Gypsum wants to extract more than twice the amount of water that was then exported to Mexico?

The 1994 Ocotillo/Nomirage Community Area Plan professes that one of its major concerns is

preservation and conservation of groundwater. To that end, one of its objectives was to urge U.S. Gypsum and the Imperial Irrigation District to "examine other water sources that can be used at the USG manufacturing plant and reduce their dependence on groundwater."

9-1
Con't.

Where is the common sense in allowing U.S. Gypsum to plunder the pristine, high-quality aquifer to wash wallboard, then replace it with trucked-in or bottled water when local wells run dry or turn saline and undrinkable?

Perhaps most disturbing is the possible impact on the basin-wide aquifer.

The EIR/EIS states outright that increased pumping by U.S. Gypsum wells will lower water levels in the basin, which cannot be offset by decreases in pumping elsewhere in the basin, enhancing recharge, or importing water.

9-2

"This is a significant and unavoidable impact on the basin-wide groundwater" and cannot be mitigated. The study also states it is not possible to restore the basin-wide water quality once it is degraded because there is insufficient recharge of non-saline water from run-off.

Birds are smart enough not to foul their own nests. Can we say the same? I implore you to let reason prevail. Do not permit U.S. Gypsum to increase pumping from this valuable resource.

Diane Epperson
P.O. Box 290
Ocotillo, CA 92259

cc: Hillary Hecht, EPA
County Board of Supervisors
Representative Bob Filner
Imperial Valley Press

Letter 9
Diane Epperson, May 30, 2006

Comment 9-1:

Response: Water usage, sources and alternatives are addressed in Volume I, Section 3.3 and Volume II, Appendix B of the Draft EIR/EIS. See General Response 4.3.6 about impacts on groundwater levels and quality of USG proposed pumping. Regarding the assumptions and methodologies used in the analysis of potential impacts on groundwater, see Response to Comments Letter 27. See also General Response 4.3.4 regarding the potential alternative of obtaining water from the IID. Regarding the objectives of the 1994 Ocotillo/Nomirage Community Area Plan (ONCAP), see General Response 4.3.11 and Responses to Comments 28-22 and 28-23, among others.

Comment 9-2:

Response: Comment noted. The Draft EIR/EIS concludes that groundwater levels will continue to decline. The Proposed Action, over 80 years, will increase that rate of decline in some areas. With Mitigation Measures 3.3-1, impacts to individual well owners will be mitigated to less than significant. The Draft EIR/EIS concludes that impacts on the Basin will not be mitigated; see General Responses 4.3.6, 4.3.7 and 4.3.8.

Regarding water quality impacts and recharge of non-saline water, the discussion in the Draft EIR/EIS (p. 3.3-80) states that the amount of basin recharge is less than the amount of basin discharge and accordingly, that if water quality deterioration occurs, then it is unlikely that there would be sufficient influx of non-saline water to improve water quality. As clarification to the Draft EIR/EIS text, if pumping results in water quality deterioration and continues unabated, then there is no reason to anticipate water quality improvement unless the pumping is reduced or discontinued, at which time water quality should improve, all other things remaining equal. See General Response 4.3.8 for perspective on this potential impact and pages 3.3-81 through 3.3-87 of the Draft EIR/EIS describing the monitoring program to be implemented as part of the Proposed Action.

Letter 10



CENTER FOR BIOLOGICAL DIVERSITY

VIA FACSIMILE TRANSMISSION

May 30, 2006

Rosa Soto
Planning & Development Services
801 Main Street
El Centro, CA 92243
Fax: 760-353-8338

Re: U.S. Gypsum Modernization/Expansion Project Draft EIR/EIS (SCH # 200112133)

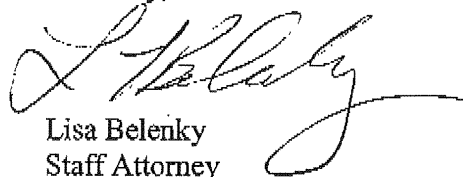
Dear Ms. Soto,

I am writing on behalf of the Center for Biological Diversity. As you are aware, we submitted scoping comments on the above-reference project.

I would like to obtain a printed copy of the Draft EIR/EIS for review, I understand that it is a very large document and is contained in two volumes. Given the short time left for comments to be submitted, I am requesting that you send us a complete copy by Federal Express Next-Day Air Service. The Center will pay for the requested overnight shipping of these documents. Our FedEx account number is: 2438-8625-2.

Thank you for your assistance with this matter. Please do not hesitate to contact me if you have any questions about this request. **Please send the requested documents and all future notices and correspondence to my attention as follows: Lisa Belenky, Center for Biological Diversity, 1095 Market Street, Suite 511, San Francisco, CA 94103.**

Sincerely,



Lisa Belenky
Staff Attorney

Tucson • Phoenix • San Francisco • San Diego • Los Angeles • Joshua Tree • Pinos Altos • Portland • Washington, DC

Lisa Belenky, Staff Attorney
1095 Market Street, Suite 511 • San Francisco, CA 94103
Tel.: (415) 436-9682 ext. 307 • Fax: (415) 436-9683
Email: lbelenky@biologicaldiversity.org • www.biologicaldiversity.org

5.0-55

January 21, 2008

U.S. Gypsum Final EIR/EIS

Letter 10
Center of Biological Diversity, May 30, 2006

Comment 10-1:

Response: A copy of the Draft EIR/EIS was provided to Center of Biological Diversity in May 2006.

Letter 11



Richard Denison
<snobble@earthlink.net>

To: lself@ca.blm.gov
cc:
Subject: U.S Gypsum Exp.

06/07/2002 08:54 AM

June 6, 2002

Bureau of Land Management
1661 South Fourth Street
El Centro, Ca 92243

Dear Mr. Greg Thomsen:

I am in opposition to the proposed U. S. Gypsum Co. expansion.

- Is the non-potable water well un-metered? | 11-1
- What will be the effect on adjacent areas when volume is increased (3) | 11-2
- time the current amount?
- Will this non-potable water seep into areas of potable water? | 11-3
- What effect will using this amount of non-potable water have on the area | 11-4
- plant & wild life?
- How was the current level of approximately 400 acre-feet per year | 11-5
- estimated without metering?
- Have any provisions been made to establish independent inspection of the | 11-6
- plant & quarry to enforce environmental issues?
- Will USG be responsible to provide water to area residents when the | 11-7
- Ocotillo Coyote Wells drops lower than existing wells?
- Has there been a study made to reduce water usage with water reducing | 11-8
- agents.
- How can the existing rejected material be recycled to lessen the demand | 11-9
- at the quarry?
- Is Plaster City with-in the Ocotillo Coyote Wells groundwater basin? | 11-10
- "Off-Basin Use" means the extraction of groundwater for use within the | 11-11
- county, which does not overlie the groundwater basin from which the
- groundwater is extracted.
- Are the wells that extract water from Ocotillo-Coyote Wells groundwater | 11-12
- basin under the jurisdiction of Imperial County groundwater management
- ordinance which idenfifies theextraction facility to be permitted &
- facility operator install water flow measuring devices & maintain a
- record of the water extracted.

Please don't let the expansion of the USG Plaster City Factory & Quarry degrade the existing vegetation & wildlife & residential communities that rely on the Ocotillo Coyote Wells groundwater basin. We need to presere these beautiful lands for future generations.

Sincerely,

Richard Denison
3814 Boone St.
S.D. CA 92117

P.O. Box 369
Ocotillo CA 92259

RECEIVED

MAY 26 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Letter 11
Richard Denison, June 6, 2006

Comment 11-1:

Response: All USG wells are metered. All future USG wells will also be metered as required and regularly monitored by the Imperial County Groundwater Management Ordinance.

Comment 11-2:

Response: As discussed in Section 3.3.3.7 of the Draft EIR/EIS, water levels in the Basin are expected to decline by up to 10 feet under baseline conditions (i.e., without the project) over the next 80 years, and if USG were to increase pumping to 767 acre-feet per year, then the decline is expected to increase by an additional 20 to 23 feet. As discussed in the Draft EIR/EIS (Impact 3.3.1) potential impacts on adjacent wells can be mitigated to less than significant. See General Response 4.3.7 for discussion of impacts on groundwater storage. Given existing depths to groundwater, plants and animals will not be impacted by such drawdown.

Comment 11-3:

Response: It is unclear as to what non-potable water the question is referring. The use of groundwater from Quarry Well No. 3 is for non-potable uses such as dust control. Groundwater recharge or return will be minimal if detectable. It is highly unlikely that any groundwater return or recharge will have any impact on local plant or wild life.

Comment 11-4:

Response: The proposed use of groundwater will not have any adverse impact on plant or animal life. Please see, General Response 4.3.2, also sections 3.4 Vegetation and 3.5 Wildlife, Volume I of the Draft EIR/EIS. See also Response to Comment 11-3.

Comment 11-5:

Response: See Response to Comment 11-1. The USG wells are now metered.

Comment 11-6:

Response: Mining operations and manufacturing facilities receive environmental inspections from numerous federal, state and local agencies. Such operations are highly regulated and frequently inspected.

Comment 11-7:

Response: As discussed in Mitigation Measure 3.3-1 on page 3.3-71 and 3.3-72 of the Draft EIR/EIS, should the water levels in a well in the Ocotillo area decrease at a rate faster than 1 foot every 8 years, the current rate of decline without the Project, due to the Proposed Action and there is documented reduction in the available water from a well, then USG will be required to mitigate the well's water loss pursuant to the four possible measures specified on page 3.3-72.

Comment 11-8:

Response: USG has made extensive efforts to reduce water use at their operations and will, as opportunities present themselves with developing technologies, continue to utilize available resources as efficiently as possible. Additionally, USG has economic incentives to reduce water use to conserve energy.

Comment 11-9:

Response: This issue is addressed in Volume I. Section 2.5.2.3 Management of Off-Specification Wall Board. The Plant strives to minimize the amount of off-specification wallboard for cost and efficiency considerations. Rejected material from the Plaster City Plant is recycled. In fact, more off-specification material than created is being recycled reducing the quantity of material in the IMSA.

Comment 11-10:

Response: Plaster City is in the Coyote Wells Valley Basin, as is Ocotillo, as defined by the California Department of Water Resources in Bulletin 118. This is commonly referred to as the Ocotillo/Coyote Wells Groundwater Basin.

Comment 11-11:

Response: Comment Noted.

Comment 11-12:

Response: Yes. USG's three existing wells and the existing water pipeline to the Plant have been registered under the Imperial County Groundwater Management Ordinance and are required to have flow measuring devices.

Letter 12



Richard Denison
<snobble@earthlink.ne
▷

To: lself@ca.blm.gov
cc:
Subject: U.S.Gypsum

06/06/2002 09:52 PM

June 6, 2002

Bureau of Land Management
1661 South Fourth Street
El Centro, CA 92243

Dear Mr. Greg Thomsen:

I am writing this letter in opposition to the proposed U.S.Gypsum Co. expansion

We are property owners in the Nomirage/Ocotillo area, and depend completely on our well for our water supply. If U.S. Gypsum adds a new larger water line from Ocotillo they would double the amount they are already taking from the groundwater basin. This is a Sole Source Aquifer that is not being replenished. There is data showing the level is declining. We are concerned for our drinking water and its quality. Will U.S. Gypsum supply is with Colorado River water if our wells are depleted? They should be the one to pipe water from Colorado river, only 4 miles away, for their use at the plant.

12-1

We are also worried about the quarry expansion. It will have a critical impact on the Big Horned Sheep, the endangered Desert Pupfish, and the Flat Tailed Horned Lizard. We have been in a drought for many seasons and our wildlife depends on the little bit of water that can be obtained.

12-2

An industrial manufacturing plant should be required to use process water from the Colorado River, not our valuable drinking water.

12-3

Sincerely,

Mrs Joyce Denison
3814 Boone St.
S. D. CA 92117
858-274-8789

P.O. Box 369
Ocotillo, CA 92259

Letter 12
Joyce Denison, June 6, 2006

Comment 12-1:

Response: As discussed in Section 2.5.2.1 and 3.3.3.7 of the Draft EIR/EIS a new 10-inch pipe would provide a more reliable water supply, minimizing line surges and associated leaks/ruptures, providing a quicker water system recovery after waterline breaks/leaks or maintenance, and improving fire protection at the Plant.

The “sole-source aquifer” designation is discussed in Section 3.3.2 of the Draft EIR/EIS. USG is concerned about the water quantity and quality as well.

The potential impacts of declining water levels and associated mitigation measures are discussed in Section 3.3.3.7 of the Draft EIR/EIS. Potential alternatives to the Proposed Action that would involve the use of Colorado River water are described in Sections 2.6.3 and 2.6.4 of the Draft EIR/EIS and are discussed in Sections 3.3.3.9 and 3.3.3.10. Additionally, see Responses to Letter 11.

Comment 12-2:

Response: The potential impacts of Quarry expansion on Peninsular bighorn sheep, pupfish and flat-tail horned lizard is addressed in Volume I, Section 3.5 of the Draft EIR/EIS. Background reports in support of the analysis appear in Volume II, Appendix C. The potential impacts of Quarry expansion on pupfish and flat-tail horned lizard were determined to be non-significant or mitigated to a level of non-significance. Also see General Responses 4.3.1, 4.3.2, and 4.3.3.

Potential impacts to Peninsular bighorn sheep are subject to a Section 7 consultation with U.S. Fish and Wildlife Service (USFWS). In addition to the data presented in the Draft EIR/EIS, a Draft Biological Assessment of the Quarry expansion was prepared. The Biological Assessment has been submitted to BLM which is responsible for formal consultation with the USFWS. A determination of potential jeopardy on the Peninsular bighorn sheep as a result of the Proposed Action will be made by the USFWS including recommendations for mitigation. It should also be noted that on August 2, 2006 the Peninsular bighorn sheep habitat was modified by court order removing areas within Imperial County. This Order includes the area surrounding the Quarry. (Aqua Caliente Band of Cahuilla Indians vs. U.S. Fish and Wildlife Service) (see General Response 4.3.1).

No surface water exists on the Quarry site or its expansion area.

Comment 12-3:

Response: See Response to Comment 12-1. See General Responses 4.3.4 and 4.3.5.

Letter 13



Richard Denison
<snobble@earthlink.ne
>

To: lself@ca.blm.gov
cc:
Subject: U.S.Gypsum

06/07/2002 09:11 AM

June 7, 2002

Dear Mr. Greg Thomsen:

I am in opposition to the proposed U.S. Gypsum Co. expansion.

I am a property owner in the Nomirage area, and depend completely on my well for our water supply. If U.S. Gypsum adds a new larger water line from Ocotillo they would double the amount they are already taking from the groundwater basin. This is a Sole Source Aquifer that is not being replenished. There is data showing the level is declining. We are concerned for our drinking water and its quality.

13-1

Will U.S. Gypsum supply us with Colorado River water if our wells are depleted? They should be the one to pipe water from the Colorado river, only 4 mile away, for their use at the plant.

We are also worried about the quarry expansion. It will have a critical impact on the Big Horned Sheep, the endangered Desert Pupfish, and the Flat Tailed Horned Lizard. We have been in a drought for many seasons and our wildlife depends on the little bit of water that can be obtained.

13-2

An industrial manufacturing plant should be required to use process water the Colorado River, not our valuable drinking water.

13-3

Sincerely,

Michael Denison
3814 Boone St.
S. D. CA 92117

P.O. Box 369
Ocotillo, CA 92259
760-358-7009

MAY 26 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Letter 13
Michael Denison, June 7, 2006

Comment 13-1:

Response: See Response to Comment 12-1.

Comment 13-2:

Response: See Response to Comment 12-2.

Comment 13-3:

Response: See Response to Comment 12-1. See General Responses 4.3.4 and 4.3.5.

Letter 14

150 SOUTH NINTH STREET
EL CENTRO, CA 92243-2850

TELEPHONE: (760) 482-4606
FAX: (760) 353-9904

AIR POLLUTION CONTROL DISTRICT



RECEIVED

JUN 08 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

June 7, 2006

Mr. Jurg Heuberger, AICP, CEP, CBO
Planning & Development Services Director
939 Main Street, Suite B-1
El Centro, CA 92243-2856

SUBJECT: Draft Environmental Impact Report/Environmental Impact Statement,
Expansion/Modernization Project United States Gypsum Company

Dear Mr. Jurg Heuberger:

Thank you for giving the Imperial County Air Pollution Control District (Air District) the opportunity to comment on the "Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS): Expansion/Modernization Project for the United States Gypsum Company (USG)." As a responsible agency the Air District issues discretionary permits to USG for any modifications and expansions involving their facility. The EIR/EIS under the Air Quality section describes the purpose and content of the permits issued to USG since 1998 by the Air District. The impacts to Air Quality are meant to be mitigated by strict compliance with federal, state and local regulations. It is the Air District's contention that as long as USG maintains and abides by the conditions found within the permits issued by this office the impacts may remain "less than significant" providing no other unforeseen problems occur. Similarly, USG is familiar with the recently adopted Regulation VIII, Fugitive Dust Control and USG's need for compliance with this Regulation. As always, we thank you for the opportunity to comment on this project. Should you have any questions please do not hesitate to call.

14-1

Sincerely,

Monica N. Soucier
APCD Specialist

CC: Brad Poiriez
Reyes Romero

January 21, 2008

5.0-67

U.S. Gypsum Final EIR/EIS

Letter 14
Imperial County Air Pollution Control District, June 7, 2006

Comment 14-1:

Response: Comment noted. The potential impacts of the Proposed Action on air quality are addressed in Volume I, Section 3.6 of the Draft EIR/EIS. Supporting technical documentation appears in Volume II, Appendix D. The commenter is correct that USG will be required to comply with the recently adopted Regulation VIII, Fugitive Dust Control, which will further ensure that the Proposed Action will not have a significant impact on air quality. A summary of Regulation VIII is attached as General Response 4.3.10.

United States Department of the Interior



U. S. GEOLOGICAL SURVEY

Reston, VA 20192

In Reply Refer To:
Mail Stop 423
SCH #2001121133

RECEIVED

JUN 08 2006

Jurg Heuberger, Director
Imperial County Planning and
Development Services
801 Main Street
El Centro, California 92243

JUN 13 2006
IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Subject: U.S. Gypsum Modernization/Expansion Project Draft Environmental Impact
Report/Environmental Impact Statement

Dear Mr. Heuberger:

As requested in your correspondence of April 7, 2006, the U.S. Geological Survey (USGS) has reviewed the subject draft environmental impact report/environmental impact statement (EIR/EIS) and offers the following comments.

SPECIFIC COMMENTS

Page 3.1-13, Section 3.1.2, Cumulative Projects, first paragraph, first sentence

Federal review of documents developed under the National Environmental Policy Act (NEPA) is not limited to the review conducted by the U.S. Environmental Protection Agency. Another Federal agency's decision to review a draft EIS is based on the proposed action, potentially affected resources, and that agency's expertise and mission.

15-1

Page 3.1-13, Section 3.1.2, Cumulative Projects, first paragraph, second sentence

NEPA regulations promulgated by the President's Council on Environmental Quality (40 CFR 1508.7) define cumulative impact. The regulation can be found at their website at <http://ceq.eh.doe.gov/NEPA/regs/ceq/1508.htm>. Supplemental information about analyzing cumulative effects can be found at their website at <http://ceq.eh.doe.gov/nepa/ccenepa/sec5.pdf>

15-2

Page 3.3-17, Section 3.3.2.1, Affected Environment, Groundwater Quality, second paragraph and Figure 3.3-7

Control points showing actual concentrations of total dissolved solids (TDS) are not presented on the figure. Also, a legend is not provided. Therefore, it is unclear if the contours represent water levels, as on figure 3.3-6, or TDS concentration. The second sentence in the paragraph states

15-3

that, “The TDS range from about 300 mg/L to over 54,000 mg/L.” This large concentration is not consistent with the TDS data presented in Tables 3.3-3 A and B.

15-3
Con't.

Page 3.3-29, Section 3.3.2.1, Affected Environment, Groundwater Use, third paragraph

The measured extraction rate for 1981-present is not shown on Table 3.3-4 unless it is the incorrectly reported as “based on production” or combined with other water use data which was based on production. If it is desired to combine all the data into one column of “estimated water use,” the various data sources should be distinguished by a footnote.

15-4

Page 3.3-42, Section 3.3.3.2, Basin Conditions, first full paragraph

Comparison of the information shown in the two figures is difficult due to use of different base maps, scales, and orientations.

15-5

Page 3.3-42, Section 3.3.3.2, Basin Conditions, second full paragraph, first sentence

The lines presumably indicating the traces of the planes through which ground-water flow is calculated are not visible on the maps.

15-6

Page 3.3-49, Section 3.3.3.3, Water Level Data, Ocotillo/Nomirage, third paragraph, last sentence

The steady decline in water levels even in the light of the extended period of wet years and decreased pumpage may not be particularly surprising if recharge is minimal and only occurs at the base of the mountain front as described on page 3.3-12, and if the ground-water flow rate is as slow as calculations on pages 3.3-42 and 43 suggest.

15-7

Page 3.3-65, Section 3.3.3.5, Discussion of Water Quality Data, third paragraph

The primary purpose of the trilinear (“Piper”) diagram is to visually describe differences in major-ion chemistry in water systems, a common application being in the solution to problems involving mixtures of waters (Walton, 1970, p 452-456). Although the data can be presented to distinguish the magnitude of TDS, the figure is designed to show relative importance of ions rather than absolute concentrations. For example, water from a well in the marine sediments should stand out due to its chemical composition -- the high percentage of sodium chloride relative to the water from other wells that had more mixed composition of cations.

15-8

Page 3.3-70, Section 3.3.3.7, Proposed Action: Impacts and Mitigation Measures, Footnote 1

The energy cost to raise water an additional 20 feet depends on the initial depth, which varies greatly in the study area, therefore, the assumptions for the “typical residence” need to be more clearly defined. Page 3.3-12 indicates that the initial depths are less than 25 feet below ground surface east of Coyote Wells and in Yuha Springs, but 100 to 160 feet below ground surface in the Ocotillo area and potentially over 200 feet at Yuha Estates. It may be more appropriate to

15-9

present the economic analysis as a range of energy cost based the cost to lift water from less than 45 feet (potential future conditions at Coyote Wells or Yuha Springs) to greater than 220 feet (potential future conditions at Yuha Estates).

15-9
Con't.

**Page 3.3-83, Section 3.3.3.7, Proposed Action: Impacts and Mitigation Measures,
Figure 3.3-17**

Like many of the figures in this section of the document, the legends are incomplete or missing entirely, therefore review by the public of the information presented is restricted. For example, base features are illegible, i.e. where is the area of this figure in relation to other maps in the document; the large dark blue arrows are not defined; and the shaded areas 1, 2 and 3 are not defined. The figure should also show which wells are currently monitored and which are newly installed, and the locations of USG wells 4, 5, and 6 referenced on Page 3.3-82.

15-10

REFERENCE

Walton, W.C., 1970, Groundwater Resource Evaluation, McGraw-Hill, New York, NY, 664 p.

Thank you for the opportunity to review and comment on this draft EIR/EIS. If you have any questions concerning our comments, please contact Lloyd Woosley of the USGS Environmental Affairs Program, at (703) 648-5028 or at lwoosley@usgs.gov.

Sincerely,



James F. Devine

Senior Advisor for Science Applications

Letter 15
United States Department of the Interior, June 8, 2006

Comment 15-1:

Response: Comment noted. Other federal agencies besides EPA may review and comment on the Draft EIR/EIS. The first two sentences of Section 3.1.2 of the Draft EIR/EIS have been replaced with the following:

The U.S. Environmental Protection Agency (EPA) and the President's Council on Environmental Quality (CEQ) have responsibilities for administering, overseeing and reviewing the implementation of NEPA. According to EPA's and CEQA's guidance, a cumulative effect is the combined incremental effects of human activities that could pose a serious threat to the environment. ~~The Environmental Protection Agency (EPA) is the official federal reviewing agency for all EISs. According to EPA's guidance, a cumulative effect is the combined incremental effects of human activities that could pose a serious threat to the environment.~~ Cumulative effects are caused by the aggregate of past, present, and reasonably foreseeable future actions and include both direct and indirect effects on resources.

Comment 15-2:

Response: Comment noted. See also Response to Comment 15-1.

Comment 15-3:

Response: Figure 3.3-6 has been revised to include a legend and scale. Figure 3.3-7 is the wrong figure. A correct figure is provided at the end of this document. As shown in the corrected Figure 3.3-7, the TDS concentrations range from about 300 mg/L to over 54,000 mg/L.

Table 3.3-3B contained errors in the 12/01/72 and 12/03/74 entries. A corrected table is at the end of this document.

Figure 5-10 from the 1996 Bookman-Edmonston study shows TDS concentrations ranging up to 54,200 mg/L in one well. That well is in the poor water quality area, across the presumed Laguna Salada Fault.

Comment 15-4:

Response: Comment noted. Table 3.3-4 has been revised.

Comment 15-5:

Response: Comment noted regarding comparison of Figure 3.3-5 and Figure 3.3-6. Systematic review of the two figures (showing simulated groundwater level contours for 1977 and 1996) indicates that the groundwater contours over time have been relationally consistent. In both, groundwater levels range from about 190 feet above msl near the U.S./Mexico border to about 300 feet above msl north of Ocotillo. Relatively steep gradients are indicated on both maps for the area east of Ocotillo. Figure 3.3-6 has been revised to include a legend and scale.

Comment 15-6:

Response: Corrected Figures 3.3-5 and 3.3-6 are at the end of this document. See Response to Comment 15-5.

Comment 15-7:

Response: Comment noted. See General Responses 4.3.6 and 4.3.7 discussion of water level trends and recharge. See Response to Comment 27-24.

Comment 15-8:

Response: Comment noted. See General Response 4.3.6 discussion of water quality.

Comment 15-9:

Response: Comment noted. The incremental cost to lift water an additional 20 feet would require about 30 to 40 KWH per acre-foot of water depending on the overall well pump efficiency. This is true regardless of the starting water level. At a cost of energy of \$0.012 per KWH the incremental cost to lift water an additional 20 feet is about \$3.60 to \$4.80 per acre-foot. This cost is in addition to the current energy cost which may be over \$60.00 per acre-foot in some parts of the area where depths to water have always been great.

Comment 15-10:

Response: Comment noted. Figure 3.3-17 has been replaced with a new Figure 3.3-17 that includes additional information. The revised Figure 3.3-17 is attached.

Letter 16



June 8, 2006

Jurg Heuberger
Director
Planning & Development Services
Imperial County
801 Main St.
El Centro, CA 92243

RECEIVED

JUN 12 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

U.S. Gypsum Modernization/Expansion Project Draft Environmental Impact Report/Environmental Impact Statement (SCH #2001121133)

Dear Mr. Heuberger,

The Colorado Desert District of the California Department of Parks and Recreation (State Parks) has completed its review of the Draft EIR/EIS for the U.S. Gypsum Modernization/Expansion Project and offers the following comments and recommendations. The Colorado Desert District of State Parks includes Anza-Borrego Desert State Park, which abuts the U.S. Gypsum project. State Parks has a number of concerns about the adequacy and accuracy of the EIR/EIS. The document tends to downplay the impacts of the project to the natural resources on the project site, and the visual impacts of the project upon recreational users of Anza-Borrego Desert State Park. The comments below have been divided into four categories: Natural Resources (vegetation and wildlife), Visual Resources (visual impacts of the project on the park), Cultural Resources (artifacts and features), and Geological Resources (geology and paleontology). Unless otherwise indicated, all of the comments refer to the quarry site.

Natural Resources

Page 2.0-9. Table 2.0-1 shows a summary of ownership of various areas of the Quarry and proposed expansions. Since the entire project site and proposed expansion is within Critical Habitat of the Peninsular Bighorn sheep, and the intention of designation of Critical Habitat is to preserve bighorn habitat, no BLM lands should be given over to mining expansion in this project. Fully one-quarter of the proposed build-out is owned by BLM, 407.9 acres of 1,640 acres total. This is the Federal nexus, and State Parks is opposed to destruction of BLM lands within Critical Habitat for the mining of gypsum. There is plenty of privately owned land to continue gypsum extraction.

16-1

Page 2.0-63. The statement made in the EIR/EIS that "The natural revegetation is consistent with pre-existing plant densities" is a major misrepresentation. What data show this to be true? What about species diversity? This is a simplification, and a statement in support of "doing nothing." Arid lands restoration takes intensive restoration effort to accomplish.

16-2

- 2.0-64. This section is written as if revegetation of the destroyed strip mine site is only hypothetical. What species mentioned are actually transplantable? When is this action to be taken? Who will monitor its effectiveness? What restrictions are in place to rectify a failed restoration process? **16-3**
- 3.4-18. We are concerned that the dismissal of the previous report of elephant trees (*Bursera microphylla*) on the project site may be premature. While it is possible that previous surveyors may have confused indigo bush with elephant trees, it is equally likely (based upon the proximity of known populations within areas of Anza-Borrego Desert State Park adjacent to the proposed project site) that small outlying populations or individuals of elephant trees may occur on the project site. The survey (and transects) cited in the EIR/EIS did not appear to be an exhaustive search to reconcile this issue. Until that occurs, it would seem that the most prudent approach would be to assume that the original survey results reporting elephant trees may be correct. **16-4**
- 3.4-23. How can the quarry activities "NOT contribute to cumulative loss of desert shrub lands"? Destruction of desert habitats from this strip mine will increase by 845 acres to a total of 1,184 acres. **16-5**
- 3.5-11. The statement in the EIR/EIS is that "The wildlife community at the quarry was surveyed intensively". Twenty-five Sherman traps and scent stations for two nights, and cursory viewing with a spotting scope on the ridges for three days is by no means intensive. This is a significant over-statement of the real effort that went into surveying for biological resources on this project site. In our estimation this survey was totally inadequate for such a complex desert system. **16-6**
- 3.5-13. The Flat-tailed horned lizard is once again proposed as "Threatened" under the ESA. **16-7**
- 3.5-14. Very cursory list, which is an inadequate representation of the site or the surrounding area, and is inadequate for making thorough evaluations about project impacts. **16-8**
- 3.5-19. Western Mastiff Bat and the Pocketed-Free Tail Bat inhabit nursery roosts nearby in Split Mountain and are fully expected to reside in the quarry site as well. **16-9**
- 3.5-19. Include the Fish Creek Mountains in the list of ranges frequented by the bighorn sheep of the Peninsular Ranges. **16-10**
- 3.5-21. Critical Habitat: All BLM lands within the proposed project site are designated as Critical Habitat and should be protected for Peninsular bighorn sheep. The text of the EIR/EIS diminishes the importance of the Fish Creek Mountains and quarry area to the Peninsular bighorn sheep. Lambing occurs on the slopes south of the quarry site and ram movements have been documented. Continued disturbance and the quarry expansion could increase the likelihood of habitat fragmentation of the Fish Creek Mountains from the adjoining Vallecito Mountains. Lack of water does not diminish quality of lambing habitat or use by all Peninsular bighorn sheep from October through May. **16-11**
- 3.5-23. What evidence supports the statement in the last paragraph, "Bats may also forage over the area although they would not likely roost." Once again, this comment brushes over the importance of the project area to wildlife. **16-12**

3.5-28. Much of the rail line is within Critical Habitat of the bighorn. Bighorn are often found as far as ½ mile away from the steep slopes of mountain ranges in the Peninsular Ranges. | 16-13

3.5-40, Paragraphs 4 & 5. Very poor representation of habitat uses by the bighorn sheep. Simplification of bighorn needs in statements such as "movement along ridges". This discounts needs of arroyos, alluvial fans, open valleys for foraging and crossings, isolated peaks and hills for lambing. | 16-14

3.5-42, Measure 3.5-1d. This measure will jeopardize Critical Habitat and could lead to habitat fragmentation. | 16-15

Visual Resources

3.1-9. The statement is made that the "quarry site is not readily visible from adjacent public recreational and wilderness areas due to its location within a canyon....." This is utterly untrue. Anza-Borrego Desert State Park and Anza-Borrego Desert State Wilderness areas are directly adjacent to the U.S. Gypsum Quarry, and the quarry stands out quite dramatically from many vista points, campsites, and ridge lines used by hikers, campers, and other park visitors. This viewshed has been degraded by a factor of at least ten times in the last thirty years in terms of size of the quarry and its dust clouds. | 16-16

3.1-12. Federal Wilderness and State Wilderness allow open camping and a designated State Primitive Camp within sight of quarry sits at the entrance to Split Mountain. Again, the impacts of the quarry operation are greatly understated in this document. | 16-17

3.7-4. The statement that "the quarry is not visible by the general public". This language pervades the document, and is a very optimistic and colorful description of potential view of the quarry, but State Park visitors and staff certainly do not share this opinion. The overall impact of the view of the quarry has expanded ten-fold since the early 1970's. | 16-18

Cultural Resources

3.8. No mention whatsoever is made of Native American trail systems, which are quite commonly observed on the slopes of the west end of the Fish Creek Mountains. Many trails can be found traversing the slopes from Split Mountain in the quarry area. As is common in this EIR/EIS, resources are overlooked and brushed over, as though they do not exist. | 16-19

Geological Resources

Geology

The geologic context and mapping of the Fish Creek Gypsum deposit (Dibblee, 1954) as presented within the draft EIR document (Figure 3.2-3) is overly simplified, in error (e.g. stratigraphic units are inconsistently used in Figures 3.2-4 and 3.2-3 line A-A'), and employs out-of-date stratigraphic nomenclature (see Kidwell and Winker, 1996). The "Imperial Formation" has been elevated to litho-stratigraphic Group level. One must presume that here the document refers to the Latrania Formation of the Imperial Group, but this is not clear. The | 16-20

Imperial Group, which now includes the Fish Creek Gypsum, ranges from late Miocene through the mid-Pliocene (see Dorsey, 2006; Deméré and Rugh, 2006). The Latrania Formation and Fish Creek Gypsum are restricted to the late Miocene and are not Pliocene in age as stated (page 3.2-7).

16-20
Con't.

In some respects the incorrect stratigraphic unit names inhibit assessment of potential negative impacts from the proposed project. For example, along parts of both limbs of the major syncline, the gypsum overlies the Elephant Trees Formation of the Split Mountain Group, not the "Imperial Formation", and not the "Gray member" of the "Split Mountain Formation" (Figure 3.2-3). The "Gray member" (lower megabreccia of other workers; Kidwell and Winker, 1996; Dorsey, 2006) is not fossiliferous. Whereas, the fossil content of the upper-most Elephant Trees Formation, where it interfingers with the base of the gypsum, has not been adequately examined (see paleontology discussion below). Furthermore, the Fish Creek Gypsum is at the base of the Imperial Group; the "Imperial Formation" (page 3.2-24) is not below the gypsum but above it.

Regardless of statements within the draft EIR document (page 3.2-8), the geological origin of the Fish Creek Gypsum is not fully understood. Early researchers attributed the deposit to surface evaporative processes like those observed in sabkha shallow marine settings (Sharpe and Cork, 1995; Dean, 1996). These studies were largely based on regional depositional context, lithological textural features, and mineralogy. However, there is no definitive evidence that the initial deposition occurred in a marine environment. The lack of appreciable amounts of calcite, dolomite and halite, the presence of authigenic euhedral mica crystals within the sulfates, elevated amounts of trace metals similar to mid-ocean thermal vent fluids, manganite nodules, thick beds of celestite, and large conduit-like structures composed of insoluble anhydrite, counter indicate a sabkha environment. More recent work, based on XRD trace metal and other geochemical analyses, suggests that the sulfate minerals precipitated in a subaqueous environment of moderate depth from thermal spring discharge related to local crustal spreading (Peterson and Jefferson, 1997, 1998). If the source of the deposit is indeed subaqueous hydrothermal and not surface evaporative, it may represent the first such deposit recognized in the western hemisphere.

16-21

Indiscriminate removal of critical parts of the deposit has and likely will destroy additional depositional features and mineralogical evidence crucial to understanding the deposit's origin. Careful geologic mapping of depositional and mineralogical features, and selected lithologic and mineralogic sampling and analyses directed towards determining the origin of the deposit is recommended as the quarry is further developed.

16-22

Paleontology

It is claimed in the draft EIR document (page 3.2-24) that "no significant paleontological resources" are expected within the impacted geological formations, which are the upper Elephant Trees Conglomerate and the Fish Creek Gypsum (despite the nomenclatural problems above). This remains to be demonstrated. Furthermore, it is implied (page 3.2-25, 26, 27) that the Fish Creek Gypsum is devoid of fossils. This is not the case (see Dean, 1988, 1996; Jefferson and Lindsay, 2006). The lower part of the gypsum deposit contains terrestrial plant microfossils and the upper part contains these taxa along with marine microfossils (see appended Table). Although such microfossils are not considered significant by themselves, they show that

16-23

preservation of a variety of organisms within the gypsum is possible and has occurred. Any invertebrate or vertebrate macro fossils from these formations would be highly significant.

16-23
Con't.

Sediments at the contact of the Fish Creek Gypsum with the underlying Elephant Trees Conglomerate are locally gradational and represent near shore depositional environments. Extensive marine ichnites are present at this horizon to the northwest of the quarry on the east flank of the Split Mountain Anticline, where the Fish Creek Gypsum pinches out between the Elephant Trees Conglomerate and the overlying Latrania Formation. Prior to and as the quarry is expanded to the southeast, careful examination for paleontological resources within these deposits at the base of the Fish Creek Gypsum, along the east limb of the major syncline, is highly recommended.

16-24

"If paleontological resources are located, they will be assessed for their potential paleontological value and extracted, if appropriate in consultation with the BLM" (page 3.2-25). The recognition and assessment of *in situ* paleontological resources requires the expertise of a trained paleontologist. There are no stated provisions for the survey of potentially fossiliferous horizons (see above) by paleontologists prior to or during excavation. Should fossiliferous remains be found and recovered, there are no stated provisions for their deposition in a designated museum repository (e.g. DPR Colorado Desert District Stout Research Center). Regarding these issues, present mitigation measures in the draft EIR are inadequate and need to be addressed and amended accordingly.

16-25

Paleontology Issues, Plaster City Plant Water Supply Alignment

The proposed water supply alignment between the Plaster City plant and the Westside Canal crosses what has been mapped as the "Palm Spring Formation" (Dibblee, 1954). It is not known what litho-stratigraphic unit within the currently recognized Plio-Pleistocene age Palm Spring Group, including the Arroyo Diablo, Olla, or Hueso Formations (Cassiliano, 2002), is present. All of these formations yield significant paleontological remains (see Jefferson and Lindsay, 2006) in varying abundances.

The paleontological content of deposits mapped as older alluvium along the alignment is unknown. However, similarly designated terrestrial sediments on the eastern side of the Salton Trough have yielded a diverse assemblage of late Pleistocene, Rancholabrean age vertebrates (Jefferson, 1991).

16-26

Not only must the proposed route be surveyed by trained paleontologists as recognized in the draft EIR document (page 3.2-26, 28), but also a literature and museum collections search should be conducted prior to the formulation of any mitigation measures. Such measures must receive additional independent review.

This concludes our comments. We request that you forward a copy of the Final EIR/EIS to the Colorado Desert District Office at the address above. If you have any questions regarding this letter please contact David Lawhead, District Environmental Coordinator at (760) 767-4315 or dlawhead@parks.ca.gov.

Sincerely,



Michael L. Wells, Ph.D.
District Superintendent

Attachment

cc: Jim Dice
Mark Jorgensen
George Jefferson

References:

Cassiliano, M.L. 2002. Revision of the stratigraphic nomenclature of the Plio-Pleistocene Palm Spring Group (new rank), Anza-Borrego Desert, southern California. *Proceedings of the San Diego Society of Natural History* 38:1-30.

Dean, M.A. 1988. Genesis, mineralogy and stratigraphy of the Neogene Fish Creek gypsum, southwestern Salton Trough, California. Master of Science Thesis, San Diego State University, California 150 p.

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Deméré, T.A., and N.S. Rugh 2006. Invertebrates of the Imperial Sea. *In* *The Fossil Treasures of the Anza-Borrego Desert*, edited by G.T. Jefferson and L. Lindsay, Sunbelt Publications, San Diego, California p. 43-73.

Dibblee, T.W., Jr. 1954. Geology of the Imperial Valley region, California. *In* *Geology of Southern California*, edited by R.H. Jahns, California Division of Mines and Geology Bulletin 170(2,2):21-81, plate 2.

Dorsey, R. 2006. Stratigraphy, tectonics, and basin evolution in the Anza-Borrego Desert region. *In* *The Fossil Treasures of the Anza-Borrego Desert*, edited by G.T. Jefferson and L. Lindsay, Sunbelt Publications, San Diego, California p. 89-104.

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Jefferson, G.T., and L. Lindsay (editors) 2006. *The Fossil Treasures of the Anza-Borrego Desert*. Sunbelt Publications, San Diego, California pp. 394.

Peterson, D.G., Jr., and G.T. Jefferson 1997. Submarine hydrothermal venting, a reevaluation of the source of the Fish Creek Gypsum, Imperial County, California. *In* *Memories, Minerals, Fossils, and Dust*. Abstracts from Proceedings of the 1997 Desert Research Symposium, San Bernardino County Museum Association Quarterly 44(1):37-38.

----- 1998. Metals detected in the Fish Creek Gypsum deposit, Imperial County, southern California, reveal a hydrothermal origin. Unpublished Manuscript on File DPR Colorado Desert District Stout Research Center 47 p.

Sharpe, R.D., and G.G. Cork 1995. Geology and mining of the Miocene Fish Creek Gypsum in Imperial County, California. *In* *29th Forum on the Geology of Industrial Minerals: Proceedings*, edited by M. Tabilio and D.L. Dupras, California Department of Conservation, Division of Mines and Geology, Special Publication 110:169-180.

Table:

Fish Creek Gypsum Fossil Assemblage (Dean, 1988; Jefferson and Lindsay, 2006)

Dinoflageletes

Hystrichokolpoma rigaudae (marine dinoflagellate)
Operculodinium centrocarpum (marine dinoflagellate)
Tectatodinium sp. (marine dinoflagellate)
Spiniferites ramosus (marine dinoflagellate)
Selenophix sp. (marine dinoflagellate)
Genera and species indeterminate (marine dinoflagellates)

Class Gymnospermae

Order Coniferales

Family Cupressaceae
Genus and species indeterminate (cypress, cedar or juniper)
Family Taxodiaceae
Genus and species indeterminate (redwoods or sequoia)
Family Pinaceae
Genus and species indeterminate (pine or spruce)
Family Ephedraceae
Ephedripites sp. H (joint-fir)

Class Angiospermae
Subclass Dicotyledones

Order Fagales

Family Juglandaceae
Juglanspollenites sp. H (walnut)

Order Malvales

Family Malvaceae
Genus and species indeterminate (mallow)

Order Asterales

Family Asteraceae
Genus and species indeterminate (sunflower)

Order Myrtales

Family Onagraceae
Genus and species indeterminate (evening-primrose)

Division Haptophyta
Class Coccolithophyceae (calcareous nannoplankton)

Order Isochrysidales

Family Gephyrocapsaceae
Dictyococcites scrippsae (?)
D. minutus
Reticulofenestra pseudoumbilica
Crenolithus daronicoides (?)

Order Discoasterales

Family Sphenolithaceae

Sphenolithus abies

S. moriformis

Family Braarudosphaeracea

Braarudosphaera bigelowii

Order Eiffellithales

Family Helicosphaeracea

Helicosphaera kamptnen

Order Coccolithales

Family Coccolithaceae

Calcidiscus macintyreii

Coccolithus pelagicus

Letter 16
Department of Parks and Recreation, June 8, 2006

Comment 16-1:

Response: The impacts to Peninsular bighorn sheep are addressed in Volume I, Section 3.5 of the Draft EIR/EIS. The project is also subject to a Section 7 consultation on potential jeopardy to Peninsular bighorn sheep between the BLM and U.S. Fish and Wildlife Service. It should be noted that the existing Quarry and Quarry expansion area are no longer within the critical habitat boundary for Peninsular bighorn sheep. The BLM acreage is no longer within critical habitat for the Peninsular bighorn sheep. See General Response 4.3.1.

Comment 16-2:

Response: Pre existing plant densities are based on field studies conducted on the site since 1995. Biological data is included in Volume II, Appendix C of the Draft EIR/EIS. The extreme alkalinity of the exposed gypsum limits plant diversity and density. Revegetation on this site will be challenging due to both to soil substrate and lack of rainfall. Please refer to the March 2003 Mine Reclamation Plan, Appendix D, Revegetation Plan for Plaster City Quarry incorporated by reference in the Draft EIR/EIS. The report is available on file with both Imperial County and BLM.

An earlier version of the Revegetation Plan date June 2002 is included in Volume II of the Draft EIR/EIS Appendix C-3. The reader should refer to the Reclamation Plan, Appendix D, which includes a full size plot plan.

Comment 16-3:

Response: The Proposed Action is not a strip mine. The gypsum being removed consists primarily of surface exposed gypsum with alluvial sands providing overburden in the western extent of the expansion area. The facility is a typical hillside quarry.

Of the species identified in the Revegetation Plan, some are salvageable. These will be selected, marked, and transplanted according to the schedule and outlined on page 15, Appendix D, Revegetation Plan, March 2003 Mine Reclamation Plan referenced in the Draft EIR/EIS. Timing, monitoring and success criteria are addressed in the same reference.

Comment 16-4:

Response: Elephant trees (*Bursera microphylla*) occur in Anza Borrego State Park north of the USG site but have not been found on the site during any of the botanical

field surveys, Volume II, Appendix C of the Draft EIR/EIS. Special emphasis was made to find and identify special status plants, including elephant trees, by professional biologists. To date no elephant trees have been found on the project site. It is the biologist's opinion that elephant trees are unlikely to occur on the site.

Comment 16-5:

Response: The loss of 845 acres of land within the boundary of an existing quarry operation in a regional context is statistically insignificant. Particularly in light of vegetative restoration following project completion this loss is not significant. It is the opinion of the document preparer that this impact will not contribute significantly to a cumulative loss.

Comment 16-6:

Response: The site has been surveyed for biological resources annually since 1995. It was surveyed for specific species in 2003 and 2005, specifically for this Draft EIR/EIS. The results are included or referenced in the Draft EIR/EIS. Most recent applicable studies appear in Volume II, Appendix C of the Draft EIR/EIS.

Comment 16-7:

Response: The most recent proposal to list flat-tailed horned lizard as threatened was withdrawn in 2006 (see General Response 4.3.3). Should the flat-tailed horned lizard be listed as threatened or endangered, the project can be conditioned by the lead agencies to comply with stipulations and protocols to protect the species.

Comment 16-8:

Response: The list is presented as common species observed on the Quarry site during site surveys conducted up to the preparation of the Draft EIR/EIS. It does not represent observations of the surrounding areas.

Comment 16-9:

Response: Western mastiff bat (*Eumops perotis*) and pocketed free-tailed bat (*Nyctinomops femorosaccus*) may roost in the area if suitable deep rock crevices occur on cliffs above the gypsum outcrops proposed for Quarry expansion. Field biologists found no suitable crevices in the gypsum outcrops themselves, and the topography suggests that such crevices would not occur.

Comment 16-10:

Response: The Fish Creek Mountains are within the Vallecito Mountain subunit of the Peninsular bighorn sheep range. See Response to Comment 16-10. See General Response 4.3.1. The Quarry has been excluded from the critical habitat of the Peninsular bighorn sheep.

Comment 16-11:

Response: The Quarry is no longer within the critical habitat for the Peninsular bighorn sheep. See General Response 4.3.1. Collar tracking data provided by the U.S. Fish and Wildlife Service does not indicate sheep activity. There is no evidence of lambing in the area of the Quarry.

Comment 16-12:

Response: Western mastiff bat, pocketed free-tailed bat, and other bat species' roosting habitats are described in Barbour and Davis (1969) and Zeiner et al., Vol. 3 (1990), both cited in the Biological Technical Report (Appendix 3 of the Draft EIR/EIS).

Comment 16-13:

Response: Portions of the existing narrow-gauge rail line are within the critical habitat of the Peninsular bighorn sheep according to the Consent Decree described in General Response 4.3.1.

Comment 16-14:

Response: Comment noted. Please see General Response 4.3.1.

Comment 16-15:

Response: Mitigation Measure 3.5-1d will not lead to habitat fragmentation. It supports formal consultation on behalf of the BLM with U.S. Fish and Wildlife Service (USFWS) to the extent it is required. The Section 7 process would determine the potential for jeopardy and help prevent fragmentation. Consultation with the USFWS was initiated with a Biological Assessment in February 2004. This determination is the USFWS's legal responsibility.

Comment 16-16:

Response: The mine site has been in operation since the early 1920's, portions of the mine are visible from the Anza-Borrego Desert State Park. The preparer would argue that the existing and proposed visibility to the park remains limited. In an effort to further quantify assumptions in the report a line of site

viewshed analysis was prepared for the existing quarry and the proposed quarry at completion. See Figure 16-1 following this response. The highest point of disturbance was utilized as the viewshed target with an eight (8) mile radius. The line of site analysis is graphically represented in Figure 16-1 attached.

The existing Shoveler Quarry is currently visible within (19,140 acres) 13.7 percent of the viewshed radius. Most of this is to the north of the site. Approximately one third of this visibility is within the Anza-Borrego Desert State Park or 0.97 percent of the existing park area (5,800 acres of visibility within a 600,000-acre park area).

Existing Quarry 1A, which sits on the western face of the Fish Creek Mountains is sheltered from visual exposure to the north but contributes to viewshed impacts within the wash and the Anza-Borrego Desert State Park to the west. The area of visibility within the park is approximately 5,023 acres or 0.84 percent of the existing park area.

Total existing visibility from within the park from both the Shoveler and Quarry 1A operations is approximately 7,340 acres or 1.2 percent of the park area.

The proposed Quarry, which appears in detail in Figure 2.0-13 of Volume 1, Draft EIR/EIS was simulated at completion in Figure 16-1. It will contribute additional disturbance to the viewshed including visibility to the park. This is estimated as an increase in area of 225 acres or 0.06 percent over the existing conditions.

The total visible area upon project completion to the park is approximately 7,565 acres of visible disturbance on approximately 1.26 percent of the park area. An increase in existing visibility of 0.06 percent.

The preparer would continue to argue that the view of the proposed Quarry is substantially obliterated by the location and that impacts to surrounding viewshed although present are both physically and statistically nonsignificant.

The park has indicated their concern for any alteration to landscape outside of the park and within their viewshed regardless of degree. The Lead Agency should consider this concern in their deliberation.

Comment 16-17:

Response: It is understood that open camping and park use is permitted throughout the 600,000-acre park. See Response to Comment 16-16 above.

Comment 16-18:

Response: See Response to Comment 16-16 above. Since 1970 the existing area of disturbance at the Quarry (338.5 acres) has increased by approximately 129.6 acres or approximately 38 percent. The planned Quarry expansion is 845.2 acres, approximately 2.5 times the existing disturbance. Refer to Table 1, Page 12 of the Mine Reclamation Plan and Table 2.0-1, page 2.0-9, Volume 1 of the Draft EIR/EIS.

Comment 16-19:

Response: A Cultural Resources Survey was conducted on the pipeline alignment and Quarry. This included Native American Consultation. This included a sacred lands search and contact with Native Americans listed by the Native American Heritage Commission. The search did not identify any Native American cultural resources within or near the project. No trails or trail systems identified within the project study area. The results of pedestrian surveys are provided in Volume I, Section 3.8 of the Draft EIR/EIS. The archaeological investigation appears in Volume II, Appendix E of the Draft EIR/EIS.

Pacific Legacy Incorporated's archaeological investigation included a search of records for cultural resources and sacred lands from two different sources, the Southeast Information Center at the Imperial Valley College Desert Museum and the Native American Heritage Commission. The searches did not identify any cultural resources or culturally sensitive areas within or near the Area of Potential Effects (APE) for the expansion of the Plaster City (Fish Creek) Quarry. All groups identified in the sacred lands search were contacted (see Appendix F, Volume II of the Draft EIR/EIS, Appendix B, Native American Consultation, page 34).

Only one cultural resource site, USG-01, was identified within the APE for the Fish Creek Quarry expansion. The site consists of a circular structure associated with a historic trash scatter. The Fish Creek Quarry area has been in operation since the early 1920s. During the early years of operation a bunkhouse/cookhouse was provided for employees at the quarry due to the isolated location of the quarry with respect to the Plaster City manufacturing plant site and lack of easy access from nearby towns, such as Westmorland and Brawley. Over the years, employees and trespassers have used the desert lands owned by USG for recreation.

A former USG Quarry Manager kept a camping trailer on USG property, south of the existing active quarry area. The site, locally known as the "Lizard Club", consists of a concrete pad and a ramada that provided shade for the trailer.

The APE does not include any land disturbances on the slopes of the west end of the Fish Creek Mountains. However, there are other patented gypsum claims, owned by National Gypsum Company, that are located in the vicinity.

The presence of “trails” on the west slopes of the Fish Creek Mountains may be of an origin other than Native Americans. Illegal immigrants commonly cross the southern portion of the Fish Creek Mountains. Quarry personnel commonly contact the U. S. Border Patrol regarding persons who are discovered in the vicinity of the Quarry. The “trails” also may be related to the movement of animals.

Comment 16-20:

Response: The generalized geologic map shown in Figure 3.2-3 is reproduced from Plate 20 in the California Division of Mines Bulletin 163, Gypsum in California by William E. Ver Planck, 1952. The attribution to Ver Planck is shown in the upper right corner of the plate. This publication has been the definitive description and summary of gypsum deposits in California for many years. The stratigraphic nomenclature was appropriate and correct at the time of publication. The exposure of gypsum during more than 80 years of quarrying, diamond core drilling programs, and field geologic mapping has not significantly changed the generalized geology as shown in Figure 3.2-3. Additional proprietary geological mapping during the course of quarrying has upheld the basic geology defined by Ver Planck. The figure was attributed to Ver Planck (1952) rather than Dibblee (1954) as indicated in the letter from the California Department of Parks and Recreation.

The legend in Figure 3.2-4 has been corrected. The age of the Fish Creek Gypsum should be Miocene rather than **Pliocene**. The cross-section needs to be redrawn to reflect the reclamation of the outcrop gypsum as well as the wash deposits. Also, the cross-section will be revised to reflect the actual geological conditions.

Numerous geologists have studied the age and origin of the Fish Creek Gypsum as well as the underlying and overlying rocks. There are varied estimates of the age of the Fish Creek Gypsum within the Miocene and Pliocene, as shown below. Numerous references were reviewed, including those referred to in the letter from the California Department of Parks and Recreation, to compile the age and stratigraphic position of the Fish Creek Gypsum. For example,

- The gypsum was assigned to the upper most part of the Miocene Split Mountain Formation and overlain by the Imperial Formation (Ver Planck 1952);
- Index species of calcareous nanoplankton extracted from clay seams interbedded with gypsum indicates a shallow marine origin for the Fish

Creek Gypsum with an age of 3.4 to 6.3 Ma for the gypsum (Dean 1996). Ms. Marlene Dean worked for USG, logging diamond drill core from extensive drilling of outcrop gypsum and subsurface gypsum in the mid-1980s and the work was used in the preparation of her M. S. thesis at San Diego State University.

- Tentative placement of the Miocene-Pliocene boundary in the overlying Latrania Formation suggests that the age of the Fish Creek Gypsum as 5.5 to 6.3 Ma, as published in Winker and Kidwell (1996), and included in Figure 3 of Dorsey (2005) as published in “Stratigraphy, Tectonics, and Basin Evolution in the Anza-Borrego Desert Region” *Geology*, July 15, 2005.
- The Fish Creek Gypsum occurs at the base of the Miocene Latrania Formation with an age of 5.5 to 6.3 Ma (Dorsey 2005), based upon a stratigraphic column compiled from Winker and Kidwell (1996). The age of the gypsum is based upon biostratigraphy.
- In a poster titled “Chronology of Late Miocene to Early Pliocene sedimentation at Split Mountain Gorge, Western Salton Trough: Implications for Development of the Pacific-North America Plate Boundary” prepared by Rebecca J. Dorsey, Amy L. Fluette, Bernard A. Housen, Kristin A McDougall, Susanne U. Janecke, Gary J. Axen, and Catherine Shirvell the stratigraphic relationship of the Fish Creek Gypsum is described as below:
 - The Fish Creek Gypsum is shown in a stratigraphic section (Figure 5. Fish Creek – Vallecito Section) as occurring at the contact of the Split Mountain Group and the Imperial Group.
 - The gypsum overlies the subaerial sturzstrom (lower megabreccia or Split Mountain sturzstrom at the top of the Split Mountain Group and beneath marine turbidites of the Lycium Member of the Latrania Formation. The Miocene – Pliocene age transition occurs at the upper contact of a megabreccia (subaqueous sturzstrom) between the Lycium Member and Wind Caves Member. In this context, the gypsum is well within Miocene age sediments.
 - A note on Figure 5 of Dorsey (2005) also states that the Miocene – Pliocene boundary is placed at the top of the upper megabreccia based upon microfossils.

In Figure 3.2-3 the gypsum is not depicted as lying above the Imperial Formation. On the east side of the valley the extensive gypsum outcrops occur either directly above granitic basement rocks or above the Gray member of the Split Mountain Formation, which is the lower megabreccia, (Split Mountain sturzstrom of Dorsey, et al. 2005).

Page 3.2-24 (Impact 3.2-2) – The Imperial Formation overlies the Fish Creek Gypsum rather than underlies it as described. In the areas containing

quarryable gypsum resources the Imperial Formation is absent due to erosion. Where encountered in relatively deep diamond drill holes in the central part of the unnamed alluvial wash the presence of the Imperial Formation has a detrimental effect on the hydration of the underlying evaporate sequence. Where the Imperial Formation is present, generally at a depth of about 300 feet or greater, almost the entire thickness of the Fish Creek Gypsum consists of anhydrite. The capping of Imperial Formation acts as an aquitard to prevent the infiltration of groundwater for the hydration of anhydrite to gypsum.

Comment 16-21:

Response: The commenter states that there is no definitive evidence that the initial deposition of gypsum occurred in a marine environment. However, information from the same sources that is used to address the stratigraphic position and nomenclature of the Fish Creek Gypsum clearly states that the sediments are of marine origin (Dean 1996). The lack of calcite, dolomite, and halite within the gypsum deposit does not eliminate its origin as a marine deposit. In the normal sequence of precipitation of salts from seawater gypsum is one of the earliest precipitates (following calcite) and halite is one of the final precipitates. In an idealized evaporite depositional basin, gypsum would form one of the outer rings and halite would form one of the innermost rings or center of the Basin. However, almost all of these same gypsum deposits contain minor amounts of disseminated magnesium and sodium chlorides and/or sulfates. Impurities of clay are a common source of chloride minerals. The negatively charged chloride ions are attracted to clay particles. Anhydrite (CaSO_4) converts to gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) in the presence of groundwater. During the hydration process there is a 26 percent volumetric expansion and a “salty” halo generally forms in the adjacent gypsum.

The lack of calcite and dolomite are unusual, but not evidence of a non-marine origin. Depending upon the initial water chemistry calcite would normally be the initial evaporite mineral to form. Dolomite begins to form as the ratio of calcium and magnesium ions in the water changes. The Mississippian Maccrady Formation, mined for almost 200 years in Virginia has very little calcium carbonate associated with the gypsum. USG underground mined these deposits from the early 1900s until 1999.

Thick beds of celestite are not known in the Fish Creek Gypsum deposit. However, the outlying outcropping of gypsum to the north of the Fish Creek Wash and located within the Anza-Borrego Desert State Park contains celestite and was quarried on a small scale during World War II. Seawater contains many dissolved mineral constituents, including strontium. Strontium is able to substitute for calcium in the crystal lattice for gypsum and anhydrite. Where the majority of the anions are strontium, the mineral celestite, (strontium sulfate (SrSO_4)) may form. *The presence of celestite in the Fish*

Creek Gypsum is not an indicator of a non-marine or hydrothermal origin for the gypsum.

Subaqueous hydrothermal origin – The Fish Creek Gypsum is **not** the first and/or only gypsum deposit to have been postulated to be of hydrothermal origin. Gypsum in the Pliocene Boleo Formation near Santa Rosalia, Baja California Sur, Mexico was postulated to be of hydrothermal origin (submarine springs) in 1930 (Touwaide, M. E. 1930, Origin of the Boleo copper deposit, Lower California, Mexico: Economic Geology, v. 25, p. 113-144 and Wilson, Ivan F. 1955, Geology and mineral deposits of the Boleo Coper District, Baja California, Mexico: U. S. Geol. Survey Prof. Paper 273, p. 28).

Regardless of whether the gypsum formed from the normal precipitation of gypsum in a sabkha, lagoonal, or basin environment the ultimate origin is marine. If of hydrothermal origin then the deposits formed from the reaction of hydrothermal fluids and seawater. If formed in sabkha, lagoonal, or basin environment then gypsum formed from the concentration of the mineral constituents of seawater through evaporation, thus resulting in the precipitation of gypsum either directly from the seawater (basin or lagoonal) or by evaporative reflux through tidal flat sediments and precipitation within the interstices from highly-concentrated pore fluids.

The conduits of “insoluble anhydrite” that sporadically occur within the Fish Creek Gypsum are believed to be of post-depositional hydrothermal origin. The “insoluble anhydrite” is actually the mineral bassanite, a non-reactive, naturally calcined gypsum sulfate hemihydrate. Similar features occur within other gypsum deposits.

There is no occurrence of “thick beds of celestite” or strontium sulfate in the Fish Creek Quarry area. Celestite has been found only on the Roberts and Peeler property, an outlier of gypsum, north of the Fish Creek Quarry. This property is wholly within the Anza Borrego Desert State Park and was worked during World War II for strontium. The presence of celestite does not prove a hydrothermal origin for the Fish Creek Gypsum.

Comment 16-22:

Response: The quarrying of gypsum in the Fish Creek Quarry will not deprive the geological or scientific communities of depositional and mineralogical information necessary for the understanding of the origin of the Fish Creek Gypsum. There are other occurrences of the Fish Creek Gypsum in the general area of the Fish Creek Quarry that are neither owned or controlled by the applicant and are not involved in the scope of the Draft EIR/EIS. The National Gypsum Company, a mining company based in Charlotte, NC, owns patented placer mining claims covering a significant area of outcropping of

the Fish Creek Gypsum. The claims are completely surrounded (inholdings) within the federally designated Fish Creek Mountains Wilderness Area and are located on the crest of the Split Mountain Anticline. The Roberts and Peeler gypsum/celestite deposit, located about 1-mile north of the Fish Creek Quarry, is wholly located within the Anza-Borrego Desert State Park and therefore protected from any extractive activities.

Comment 16-23:

Response: In Impact 3.2-2 on page 3.2-24 of the Draft EIR/EIS the last sentence at the bottom of the page has an error. The sentence “However, because this formation lies **below** the gypsum formation being quarried” should be modified to state “However, because this formation lies **above** the gypsum formation being quarried” to correct the inaccurate stratigraphic sequence of the Fish Creek Gypsum and the overlying Imperial Formation.

In the context of the Draft EIR/EIS the statement that “there are no significant paleontological resources within the impacted geological formations” is defensible. The Fish Creek Gypsum is the only fossiliferous geological formation that is in the vicinity of the quarrying operations in the Fish Creek Quarry. Since quarrying began in the early 1920s extraction has been confined to the prominent outcroppings of gypsum along the eastern side of the unnamed alluvial wash.

The assemblage of microfossils and pollen within the Fish Creek Gypsum listed in the public comment response letter from the California Department of Parks and Recreation and attributed to Dean (1988) and Jefferson and Lindsay (2006) is **printed verbatim** from Tables 1 and 2 in the Appendix of the book Fossil Treasures of the Anza-Borrego Desert. The fossil assemblage listed occurs within the Fish Creek Gypsum, but not specifically in the areas included in the Draft EIR/EIS.

The commenters statement that “Any invertebrate or vertebrate macrofossils from these formations would be highly significant” is not supported by the fossil assemblage quoted in the list attached to the California Department of Parks and Recreation and the book Fossil Treasures of the Anza-Borrego Desert. The fossil assemblage listed includes a comprehensive list of fossils found within the Fish Creek Gypsum.

Dean (1988) identified the fossils as occurring within thin beds of clay within the gypsum, rather than specifically in the gypsum. Ms. Dean managed a diamond core drilling program during part of her graduate education at San Diego State University. Ms Dean logged drill cores from areas of the active and future quarrying areas. Fossils present in the gypsum and/or interbedded clay beds include dinoflagellates and calcareous nannoplankton. In addition, the Fish Creek Gypsum contains pollen from several terrestrial species of

trees (cypress, cedar, juniper, redwood, sequoia, pine, spruce, fir, and walnut) and flowers (mallow, sunflower, and evening primrose). The pollen within the gypsum and/or clay would have been deposited by aeolian processes (wind borne) from plants or episodic influxes of suspended solids in muddy water from terrestrial sources. The pollen is not associated with the hypersaline, marine, or even hydrothermal conditions in which the gypsum was deposited.

The principal fossiliferous stratigraphic unit in the Fish Creek area, the Imperial Formation, has not been affected by more than 80 years of quarrying activities. The Imperial Formation is not present on the east side of the unnamed wash. As the gypsum dips westward beneath Quaternary alluvium in the unnamed wash the Imperial Formation is partially preserved on top of the Fish Creek Gypsum at a depth of about 300 feet or greater. Where the Imperial Formation has been encountered in diamond core drilling the underlying Fish Creek Gypsum is predominantly composed of anhydrite and thus not recoverable for manufacturing wallboard. However, the economic limit of stripping the alluvial overburden (sand, gravel, and boulders from episodic flash flooding) for quarrying gypsum is 100 feet. Any recovery of gypsum beneath more than 100 feet of alluvial overburden would have to be done by underground methods and would not affect the overlying Imperial Formation.

Comment 16-24:

Response: Extensive core drilling and mapping of the gypsum outcrops indicates that the gypsum on the east side of the unnamed wash was deposited: (1) unconformably upon a basement terrain of “granitic” igneous rocks or (2) upon an irregular terrain of igneous boulders representing subaerial landslides. In most cases the gypsum is separated from the underlying rock by a sequence of thin gypsum beds interbedded with arkose, white sand (aeolian deposit?), and clay.

The quarry benches are developed and extended downward and laterally until the minimum purity of gypsum required for manufacturing products is encountered. In many cases, the lower part of the evaporite sequence is composed of anhydrite or a mixture of gypsum and anhydrite that is of too low quality for use in the various products shipped directly from the Fish Creek Quarry or calcined and used for manufacturing wallboard at the Plaster City Plant. In other cases, an interbedded mixture of lithologies described in the paragraph above defines the practical cutoff for quarrying.

In either case, the lowermost portion of the Fish Creek Gypsum and underlying sediments are generally preserved because they are not quarryable due to the low gypsum purity and/or the geometry of quarry bench development.

Comment 16-25:

Response: The presence of *in situ* paleontological resources in the Fish Creek Gypsum and overlying Imperial Formation has already been well documented. Therefore no more additional surveys are required. Studies of the fossil assemblage in the Fish Creek Gypsum has been published by Dean (1988) and Jefferson and Lindsay (2006).

The assemblage of microfossils and pollen within the Fish Creek Gypsum listed by the commenter is printed verbatim from Tables 1 and 2 in the Appendix of the book Fossil Treasures of the Anza-Borrego Desert. See Response to Comment 16-23.

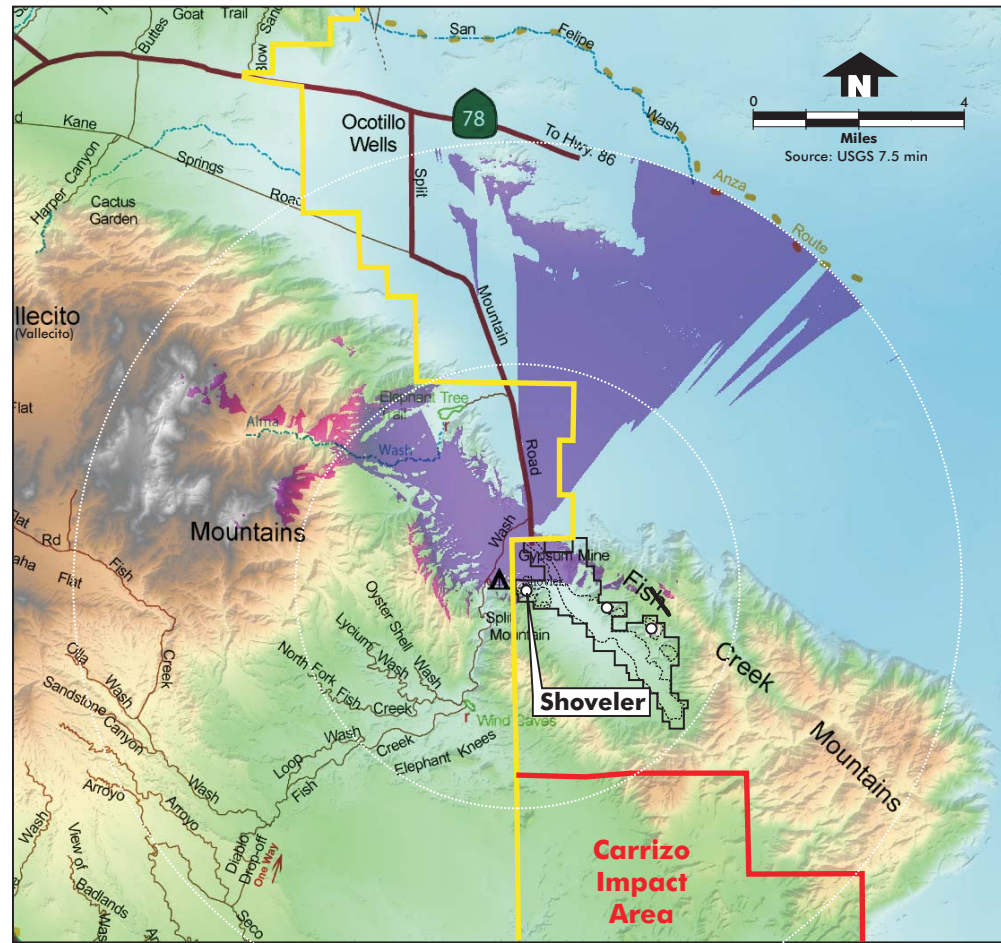
The nature and origin of the geologic formations on-site is such that no significant paleontological resources would be expected to exist. The gypsum occurs stratigraphically above igneous/metamorphic basement rock or megabreccia at the top of the Split Mountain Group. The overlying Fish Creek Gypsum contains a well documented fossil assemblage, consisting of microfossils and pollen. The gypsum is overlain by the Imperial Formation.

Comment 16-26:

Response: The pipeline right-of-way from the Westside canal to the Plaster City Plant, if implemented, will be subjected to CEQA review including cultural and paleontological review prior to authorization. An alignment must be selected, engineered and submitted to the County for consideration. This would potentially appear as a supplement or amendment to this document.

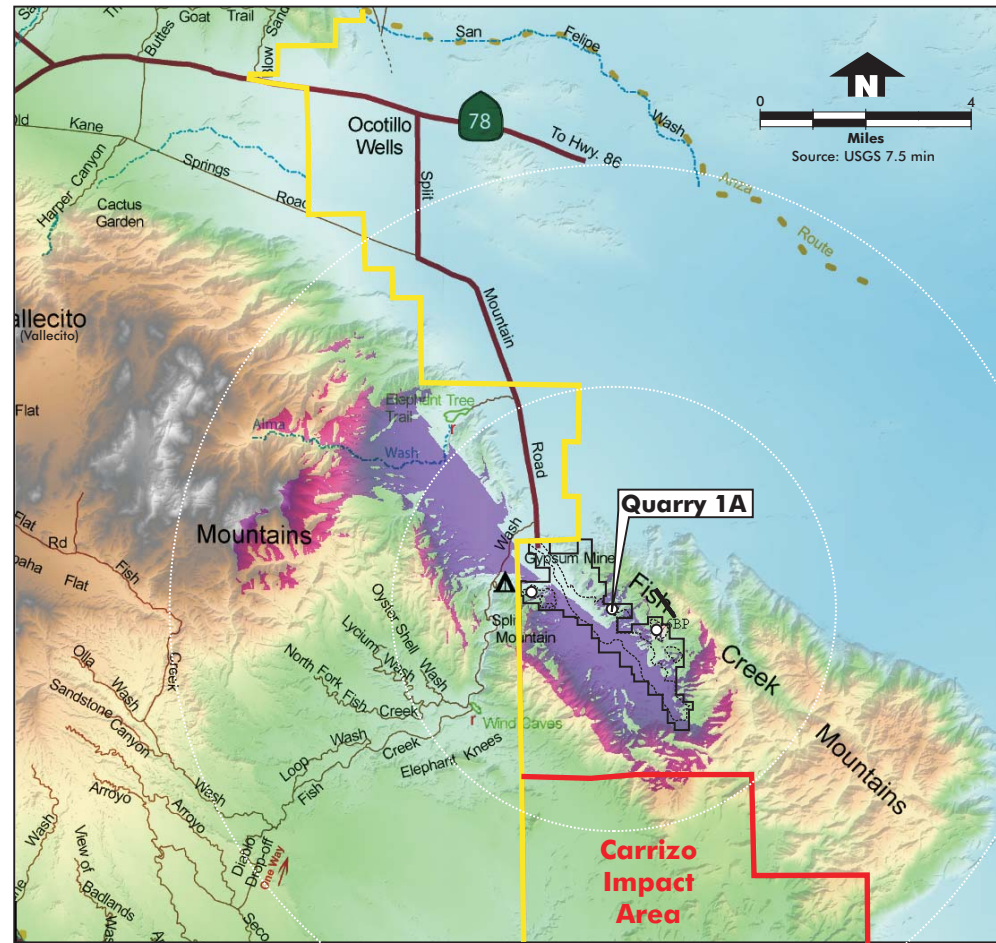
Comment 16-27:

Response: Request noted.



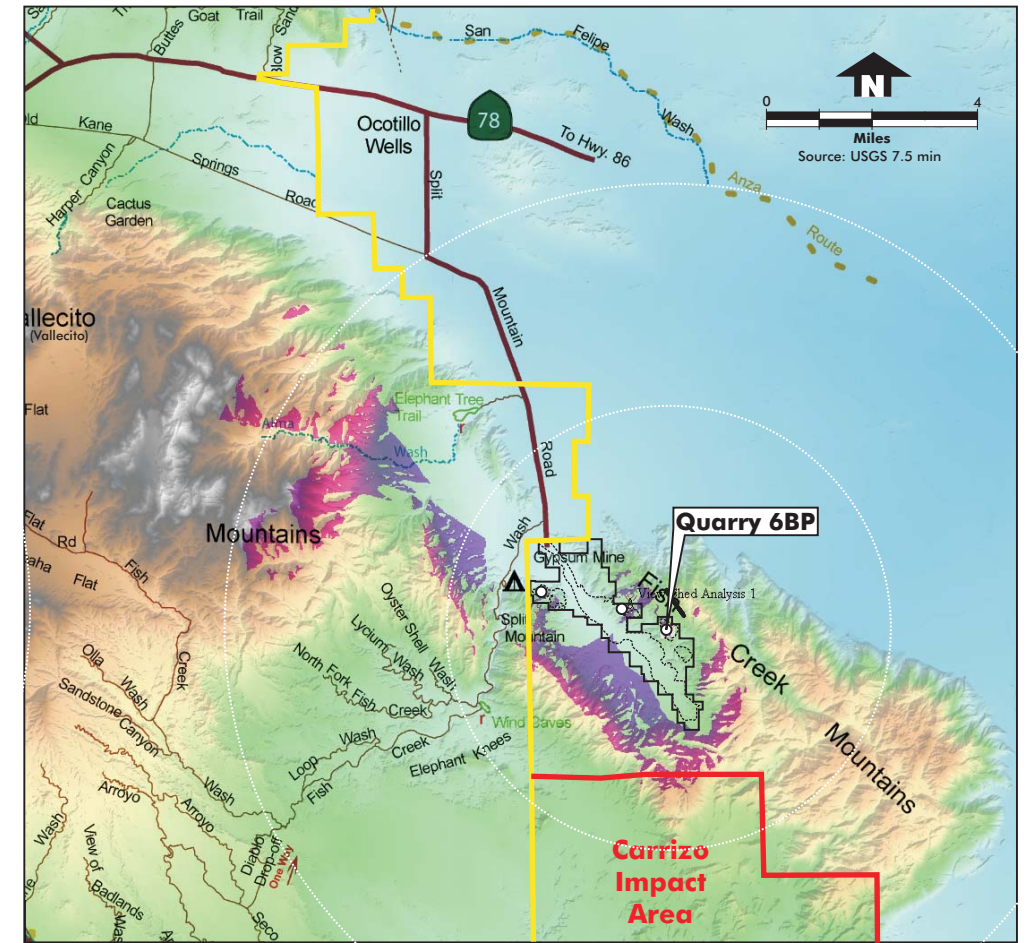
Shovelers Quarry (existing)

Location: 33.020313 N, 116.101786 W
Quarry Elevation: 550 feet
Study Radius: 8.0 miles
Percent Visible: 13.7%



Quarry 1A (existing)

Location: 33.0173613 N, 116.071232 W
Quarry Elevation: 715 feet
Study Radius: 8.0 miles
Percent Visible: 4.3%



Quarry 6BP (proposed)

Location: 009855 N, 116.059707 W
Quarry Elevation: 960 feet
Study Radius: 8.0 miles
Percent Visible: 6.9%

LEGEND

- Anza Borrego State Park
- Carrizo Impact Area
- U.S. Gypsum Property
- U.S. Gypsum Area of Disturbance



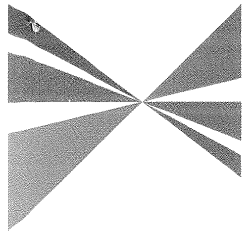
Areas within the Line of Site Analysis
 (purple=low elevation and red=higher elevation)

Line-of-site Analysis

United States Gypsum Company - Plaster City Quarry
 County of Imperial, California

Letter 17

SOUTHERN CALIFORNIA



ASSOCIATION of GOVERNMENTS

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Ventura County: Judy Mikels, Ventura County • Glen Becerra, Simi Valley • Carl Morehouse, San Buenaventura • Toni Young, Port Hueneme

Orange County Transportation Authority: Lou Correa, County of Orange

Riverside County Transportation Commission: Robin Lowe, Hemet

Ventura County Transportation Commission: Keith Millhouse, Moorpark

8 June 2006

Mr. Jurg Heuberger
Planning and Development Services Director
County of Imperial
801 Main Street
El Centro, CA 92243

**RE: Comments on the Notice of Availability of a Draft Environmental Impact Report/
Environmental Impact Statement for the US Gypsum Modernization/Expansion
Project
SCAG No. I20060248**

Dear Mr. Heuberger:

Thank you for submitting the Draft Environmental Report for the above-mentioned project to SCAG for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects, and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

SCAG staff has evaluated your submission for consistency with the Regional Comprehensive Plan and Guide and Regional Transportation Plan. The Draft EIR does not yet address SCAG's comments on the Notice of Preparation from our letter dated 10 January 2002 and published in the Draft EIR. We expect the Final EIR to provide explanation of how the plan helps meet and support regional goals.

A description of the proposed project was published in the April 1-15, 2006 Intergovernmental Review Clearinghouse Report for public review and comment. Please allow sufficient time for review of the Final EIR when it is available.

If you have any questions, please contact me at (213) 236-1851. Thank you.

Sincerely,

Brian Wallace
Associate Regional Planner
Intergovernmental Review

RECEIVED

JUN 12 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

January 21, 2008

DOCS # 123009

5.0-97

U.S. Gypsum Final EIR/EIS

17-1

Letter 17
Southern California Association of Governments, June 8, 2006

Comment 17-1:

Response: The Draft EIR/EIS Volume II includes SCAG's scoping letter and attachments. See Volume I, Section 3, Land Use. Additionally, the Project is not particularly relevant to any SCAG policies. However, the Regional Comprehensive Plan is considered through the application of the local General Plan. SCAG requests in its scoping letter of January 2002 that the Project be compared to local and regional plans for consistency. SCAG outlines areas of plan guidelines and policies that may be applicable. These include:

Growth Management Chapter (GMC) of the Regional Comprehensive Plan and Guide (RCPG) 2.02 timing, financing and location of public facilities, utility systems and transportation systems. The proposed Project incorporates private facilities, utilities and transportation systems. All of these systems excluding the IID canal water alternatives are non-public. They also have no relationship to growth or growth policies. Impacts to water systems and groundwater are addressed in Section 3.3 Hydrology and Water Quality, Volume 1 of the Draft EIR/EIS and Responses to Comments in this Final EIR/EIS document.

Transportation plan policies including mitigation to acceptable levels and utilizing existing systems are considered in Section 3.11 Traffic and Circulation, Volume I, of the Draft EIR/EIS. The Proposed Action would have no impact on existing transportation systems. No control measures were proposed.

The proposed activities take place in a rural setting with minimal development beyond immediate utility infrastructure. The relevance to urban landform impacts beyond the County's General Plan is not addressed. GMC 3.10 – "support local jurisdiction's actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness" would conflict with the analysis effort undertaken by this review effort, which requires a review and analysis of modifications to a previously reviewed, permitted and constructed facility.

SCAG regional quality of life policies and goals are urban in orientation. The Draft EIR/EIS does address impacts to development both existing and projected in the Ocotillo area in relationship to pumping groundwater and impacts to existing water users (the principal issue of this analysis).

The proposed Project is consistent with the County's General Plan document and local air district directives. Air quality impacts are addressed in

Section 3.6, Volume 1 of the Draft EIR/EIS. Regional and local plans are the jurisdiction of the local lead agencies. Impacts to planning policies and guidelines are addressed in the Section 3.8, Land Use, Volume 1 of the Draft EIR/EIS and determined to be non-significant.

In regard to water quality GMC 11.07, the Proposed Action is consistent with the policy. The impacts are addressed in Section 3.3, Hydrology and Water Quality, Volume I of the Draft EIR/EIS. Water quality and quantity impacts and alternatives are the primary focus of this draft and final impact analysis.

Coyote Valley Mutual Water Company

P.O. BOX 126 • OCOTILLO, CA 92259 • 760/ 358-7396

12 June 2006

RECEIVED

Jurg Heuberger, Planning Director
Imperial County Planning Department
939 Main St., Suite B-1
El Centro, CA 92243

JUN 16 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Re: U.S. Gypsum Expansion/Modernization Project Draft EIR/EIS

Dear Mr. Heuberger,

We have just reviewed the April 2006 draft of the Environmental Impact Report/ Environmental Impact Statement regarding U.S. Gypsum's expansion and modernization of the Plaster City plant. As a water supplier to the residents of Ocotillo, we are gravely concerned about the company's proposal to more than *double* the amount of water they already pump from our EPA-designated sole-source aquifer.

In the 1970s, Imperial County attempted to halt or limit the export of water from the Ocotillo/Coyote Wells basin to Mexico because of concerns regarding overdraft of the aquifer and degradation of water quality. Where is that concern *now*, considering that U.S. Gypsum wants to extract more than *twice* the amount of water that was then exported to Mexico?

The 1994 Ocotillo/Nomirage Community Area Plan professes that one of its major concerns is preservation and conservation of groundwater. To that end, one of its objectives was to urge U.S. Gypsum and the Imperial Irrigation District to "examine other water sources that can be used at the USG manufacturing plant and *reduce their dependence on groundwater.*"

Where is the logic in allowing U.S. Gypsum to plunder the pristine, high-quality aquifer to wash wallboard, then replace it with trucked-in or bottled water when local wells run dry or turn saline and undrinkable?

Perhaps most disturbing is the possible impact on the basin-wide aquifer. The EIR/EIS states outright that increased pumping by U.S. Gypsum wells *will* lower water levels in the basin, which cannot be offset by decreasing pumping elsewhere in the basin, by enhancing recharge, or by importing water. "This is a *significant and unavoidable* impact on the basin-wide groundwater" and *cannot be mitigated.* The study also states

18-1

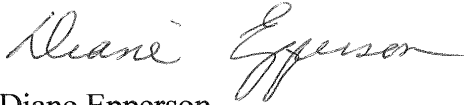
18-2

it is not possible to restore the basin-wide water quality once it is degraded because there is insufficient recharge of non-saline water from run-off.

**18-2
Con't.**

Birds are smart enough not to foul their own nests. Can we say the same? We implore you to let reason prevail. Do not permit U.S. Gypsum to increase pumping from this valuable, irreplaceable resource.

Sincerely,



Diane Epperson
Secretary

cc: Environmental Protection Agency
County Board of Supervisors
Bureau of Land Management
Representative Bob Filner
Assemblywoman Bonnie Garcia
Senator Denise Ducheny
Imperial Valley Press

Letter 18
Coyote Valley Mutual Water Company, June 12, 2006

Comment 18-1:

Response: While the comment draws parallels between the proposed increase in USG pumping near Ocotillo and the historical pumping near Yuha Estates and export to Mexico, significant hydrogeologic differences exist between the two areas; see General Response 4.3.6. With regard to impacts on nearby wells of overdraft and potential water quality deterioration, the Draft EIR/EIS concludes that the impacts are significant, but can be mitigated to less than significant. Specifically, water levels in the Basin are expected to decline by up to 10 feet under baseline conditions (i.e., without the project) over the next 80 years, and if USG were to increase pumping to 767 acre-feet per year, then the decline is expected to increase by an additional 20 to 23 feet. The thickness of the Basin in the Ocotillo area is approximately 460-500 feet, and the expected additional drawdown is minor in relation to the overall thickness of the aquifer. An additional projected 20 to 23-foot decline in groundwater level would not have an adverse impact on any special status plant or animal species because the depth to groundwater in the Ocotillo area currently ranges from about 100 to 160 feet below ground surface.

With regard to other water sources, see General Response 4.3.4. The Draft EIR/EIS addresses the possibility of utilizing alternative water resources (e.g., Imperial Irrigation District water and groundwater in the Plaster City area). However, aquifer pumping test results showed that the hydraulic conductivity of the groundwater in the vicinity of the Plant was low (0.4 to 0.5 ft/day), and because that aquifer is relatively thin (less than 300 feet thick), a larger number of wells would be needed over a larger area to provide the quantity of water needed for USG's operation. And, more significantly, water quality data from ATS Laboratories showed that groundwater sodium chloride concentrations are much higher than is acceptable for use in the Plaster City Plant. Lab results show TDS of 9,678 mg/l and a specific conductivity of 13,700. Field specific conductivity measurements, which estimate the total dissolved solids, taken during the pumping tests remained high and generally unchanged to the end of the tests. Chloride is a problem with wallboard production. Lab results showed chloride concentrations to be 3,258 mg/l. Thus the consideration of the use of this water on a blending basis with other waters of lower salinity is impractical due to the excessively high salinity of this water. Only a very small amount of this poor water could be used, if any.

Regarding the Ocotillo/Nomirage Community Plan (ONCAP) the reader should refer to General Response 4.3.11 and Responses to Comments 28-22 and 28-23.

Water is not used to “wash” wallboard. See Response to Comment 25-8.

Comment 18-2:

Response: See General Responses 4.3.6 and 4.3.7. With regard to impacts on the Basin of overdraft and potential water quality deterioration, the Draft EIR/EIS concludes that the impacts are significant and cannot be mitigated. This acknowledges overdraft—which is defined on a basin-wide basis—and the fact that increased pumping would increase overdraft. Overdraft is evidenced in the Basin by declining groundwater levels (see General Response 4.3.7). The decline in storage is small relative to the overall storage in the Basin; nonetheless, the decline in storage itself is an adverse impact, representing sustained depletion of a shared resource. See General Response 4.3.6 for discussion of potential impacts on groundwater quality.

With regard to restoration of Basin water quality, a discussion in the Draft EIR/EIS states that the amount of Basin recharge is less than the amount of Basin discharge and accordingly, if water quality deterioration occurs, then it is unlikely that there would be sufficient influx of non-saline water to improve water quality. As clarification to the Draft EIR/EIS text, if pumping results in water quality deterioration and continues unabated, then there is no reason to anticipate water quality improvement unless the pumping is reduced or discontinued, at which time water quality should improve, all other things remaining equal. The rate and degree of improvement is not known.

Letter 19



Terry Weiner
<jtdesert@ixpres.com
>
Sent by: jim
<jtdesert@pacbell.net>

To: LSelf@ca.blm.gov
cc: Greg Thomsen <gthomsen@ca.blm.gov>
Subject: Re: Scoping Comments -U.S. Gypsum Expansion

07/08/2002 03:36 PM
Please respond to Terry
Weiner

RECEIVED

MAY 26 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Bureau of Land Management
1661 South Fourth Street
El Centro, CA. 92243
Attention: Linda Self

July 8, 2002

Re: Scoping Comments on the Notice of Intent to Prepare an Environmental Impact Statement (EIS) on the Proposed Expansion/Modernization of the U.S. Gypsum Wallboard Manufacturing Facility and Associated Quarry Operation (CA- 44014)
Imperial County, California

Dear Ms. Self,

The Desert Protective Council (DPC) thanks you for the opportunity to submit scoping comments on the U.S. Gypsum Expansion Proposal. We also incorporate, by reference, all written scoping comments submitted on the U.S. Gypsum expansion activities by the Sierra Club and the DPC since 1993.

First of all, we wonder how a company that has recently declared bankruptcy will be able to manage an expansion of its operations as well as complete its obligations to mitigate the impacts that will be caused by this expansion. The BLM needs to carefully assess the financial ability of U.S. Gypsum to fulfill its responsibilities with regard to Federal Requirements of the proposed project. How will the BLM be assured that U.S. Gypsum won't declare financial inability to mitigate damage to the environment and to clean up its waste piles, do reclamation and not walk away from the operation? The BLM needs to address the discrepancy between the U.S. Gypsum's recent declaration of bankruptcy in the face of a court decision which requires environmental review and the submittal of papers to the BLM for ROW permits stating the factory has annual sales of \$2 billion.

19-1

The EIS needs to address the local and regional impacts to the air quality of the quarrying,

19-2

processing and transportation of gypsum. Analysis of types of particulates produced, distribution, toxicity to plants and animals, and additional tonnage of particulates per year added to the atmosphere as a result of the expansion needs to be completed. In this regard, an analysis of the fine, white, particulate matter which covers local vegetation in the area of Plaster City should be completed. Does this particulate matter affect the plants' ability to reproduce? Does it affect the quality of the plants' nutritional value for the insects and animals, in particular, harvester ants and the Bighorn Sheep, that rely on these plants for sustenance? Increased truck, rail, and other traffic impacts and additions to air pollution must be addressed.

19-2
Con't.

Expansion of quarry operations onto previously unmined BLM lands in the Fish Creek Wash, going 100 feet deep into the drainage that is a source of flow into the San Sebastian Marsh, San Felipe Creek ACEC, and designated Critical Habitat for the desert pupfish will cause unmitigable damage. An alternative which avoids impacting these sensitive areas must be considered.

19-3

The DPC is most concerned with impacts of the proposed expansion on the aquifers and Groundwater Basins that will be tapped for various uses and to varying degrees. We urge the BLM to not approve any alternative that proposes using groundwater from a small fossil groundwater basin with no significant re-charge since the end of the last Ice Age.

19-4

We urge the BLM to insist on "No-Dig" technology for any pipeline for water from any source.

19-5

We urge the BLM to not grant a ROW for water sources through FTHL habitat or through any endangered or sensitive species habitat. We understand that Congress, in the 1980s, granted an extension of the IID's boundaries so that IID could supply Colorado River water for industrial use in the Plaster city area. U.S. Gypsum, as a private, for-profit company, needs to pay for their Industrial water use and treat Colorado River water; the BLM needs to insist upon protection of the fragile desert aquifers and the arid land under which they lie.

19-6

In reference to plans to "revegetate" as part of reclamation, let us be honest about the history of failure of revegetation schemes after mining and other destructive activities in desert areas. U.S. Gypsum cannot be allowed to suggest that revegetation will be a mitigation tool, given this record of failure. The Imperial County desert areas are now in an extended dry period, which may add more stress to the flora and fauna of the area, and further doom any potential for successful revegetation efforts.

19-7

The DPC is interested in seeing, in this EIS, thorough analysis of impacts, both immediate and cumulative, of the proposed project's expansion on cultural, archaeological, historical, and paleontological resources of the area. An inventory of the cultural resources in the area needs to be completed before any alternative other than the "No Action" alternative can be approved.

19-8

Please include the issue of artificial lighting and its impacts to nocturnal insects, reptiles and animals. The impact of night lights on humans and the insult to the intrinsic value of dark skies as part of our natural heritage should also be addressed.

19-9

Long and short-term impacts to the nearby Wilderness areas and to the Anza Borrego State Park must be addressed. In what ways will this proposed expansion affect the quality of the desert state park experience? In terms of dust, noise, visual impacts, noise from blasting, railroad, road,

19-10

and other noise?

**19-10
Con't.**

This proposed project expansion must be analyzed in terms of its impacts on endangered and threatened species. The BLM should consult with the other agencies involved in the Bighorn Sheep Recovery Plan and the Desert Tortoise Recovery Plan. The BLM needs to take into account the proposed rule to list the Flat-Tailed Horned Lizard. Whether or not the U.S. Fish and Wildlife Service decides to list the FTHL, protection of the lizard's habitat from further degradation will be important in preventing the further decline of this species.

19-11

All impacts to the endangered desert pupfish must be avoided rather than mitigated.

19-12

The DPC looks forward to seeing a thorough analysis of a "No Action" Alternative in the EIS.

19-13

Thank you very much for granting the Desert Protective Council this time extension to submit scoping comments on the U.S. Gypsum proposed expansion. We appreciate BLM El Centro's thorough assessment of this project and consideration of all issues during the NEPA review process. Please keep us on the mailing list for all documents and meetings and other actions involving this project.

Sincerely,

Terry Weiner
Conservation Coordinator

Letter 19
Desert Protective Council, July 8, 2006

Comment 19-1:

Response: U.S. Gypsum Company, its parent USG Corporation and USG's domestic (U.S.) subsidiaries filed for bankruptcy protection on June 25, 2001 in the United States Bankruptcy Court for the District of Delaware because of mounting asbestos litigation. USG's Plan of Reorganization was confirmed by the Court on June 16, 2006 and became effective on June 20, 2006. A trust was created to handle all asbestos claims, which is now fully funded. All other creditors were paid in full. The commenters inference that the bankruptcy was in response to a court decision concerning Plaster City environmental review is not accurate.

Comment 19-2:

Response: Air quality is discussed in Section 3.6 of the Draft EIR/EIS. The local and regional impacts to air quality based on the net new emissions were reviewed, analyzed and documented. Particulate matter less than 10 microns in diameter (PM₁₀) is expected to be reduced by approximately 51 tons per year at the Quarry due to additional controls including enclosures, baghouses, and paving. Therefore, as compared to baseline, the Project will have a PM₁₀ benefit. Increase emissions from trucks and railroad are discussed in Section 3.6, Air Quality, page 3.6-36. See General Response 4.3.10.

Comment 19-3:

Response: Volume I, Sections 3.4 and 3.5 address impacts associated with vegetation and wildlife. This includes a discussion of desert pupfish beginning on page 3.5-15 and continuing through the section with impacts addressed beginning on page 3-32 and illustrated on Figures 3.5-4 and 3.5-5 and Table 3.5-2. The project will not cause "unmitigable damage" (sic) to desert pupfish. In fact, the impacts to pupfish are insignificant. Alternatives to the Proposed Action are also addressed in this section. The reader should also refer to General Response 4.3.2 on pupfish.

Comment 19-4:

Response: With regard to impacts on groundwater, the Draft EIR/EIS indicates that water levels in the Basin are expected to decline by up to 10 feet under baseline conditions (i.e., without the project) over the next 80 years, and if USG were to increase pumping to 767 acre-feet per year, then the decline is expected to increase by an additional 20 to 23 feet. See also 4.3.7 for discussion of the water balance of the groundwater basin, which presents several estimates of

recharge to the groundwater basin ranging from 1,077 AF/Yr to 2,631 AF/Yr under recent conditions. See also General Response 4.3.4 for water supply alternatives and 4.3.5 for groundwater management.

Comment 19-5:

Response: Comment noted.

Comment 19-6:

Response: Comment noted. USG is in the process of applying for the right to use IID water. The feasibility of using IID water has not been determined. Using only IID water is likely not feasible and would create additional adverse environmental impacts. See also General Response 4.3.4 for water supply alternatives.

Comment 19-7:

Response: The commenter refers to a “history of failure of revegetation schemes.” No evidence for such claim is provided and the allegation appears to be general, not specifically to USG. Mine reclamation is regulated by the State Surface Mining and Reclamation Act (SMARA). It is administrated by the County with oversight by the California Department of Conservation, Office of Mine Reclamation. Mining and reclamation are monitored annually with reporting to the State. Reclamation commitments are conditioned by the County and bonded for performance. Projected reclamation costs are reviewed annually. In the event of non-performance the County may attach the bond and complete closure and reclamation independent of the operator.

Comment 19-8:

Response: Cultural resources are addressed in Volume I, Section 3.8, Cultural Resources and Volume II, Appendix E of the Draft EIR/EIS. Paleontological resources are addressed in Volume I, Section 3.2, Geology. A discussion of paleontological impacts begins on page 3.2-24 and continues through the end of the section. Inventories of cultural resources are typically referenced but excluded from Draft EIR/EIS to prevent identification leading to disturbance.

Comment 19-9:

Response: Artificial light and glare are addressed in Volume I, Section 3.7, Visual Resources of the Draft EIR/EIS. Impact analysis begins on page 3.7-22 for each of the alternatives. Presumably, night lighting would tend to attract nocturnal insects toward the light sources and these, in turn would tend to attract foraging bats. We know of no particular effects of increased lighting on reptiles. More generally, animals (including reptiles) respond to disturbances

(including increased lighting) by avoiding the disturbance. General disturbance impacts have been fairly well-documented for a few species including deer, small mammals, some reptiles, and some birds. Most species exhibit a "flight" response to disturbance resulting in temporary, or if disturbance is constant, permanent displacement. Large animals may alter movements for 1-2 days after exposure to noise disturbance. If the noise occurs on a schedule, deer may avoid the area during noisy times and return when the noise is gone. If the animals are exposed repeatedly to the same noise stimulus without harassment, the response declines. Increased noise and lighting would likely expand the existing zone of disturbance with reduced numbers of animals and a lower diversity of species near the mine and facilities.

This effect would be less pronounced for the Plant where wildlife disturbance is less likely. The Plant does produce light and glare that is not expected to significantly change with the proposed expansion/modernization.

This existing and expanded facility minimally contributes to a cumulative urban glow along with every light source within the region. Although cumulative, the project does not generate a significant increase in light. In comparison to nearby urban areas like San Diego and Orange County this region still maintains much of the dark night qualities associated with rural or unhabited areas.

Comment 19-10:

Response: Compatibility with wilderness areas, specifically the Anza Borrego State Park is addressed in Volume I, Section 3.9, Land Use, page 3.9-11. It is also addressed in Sections 3.7, Visual Resources and in response to comments. The visual resources section has been revised based on State Park comments. The impacts are determined to be less than significant.

Comment 19-11:

Response: Volume I, Section 3.4, Vegetation and 3.5, Wildlife address the issues of impacts on endangered and threatened species. Peninsular bighorn sheep, desert tortoise, flat-tailed horned lizard are all addressed in these sections. Technical reports appear in Volume II, Appendix C. The Project is also subject to a Section 7 consultation on impacts to Peninsular bighorn sheep between BLM and the U.S. Fish and Wildlife Service. The reader should also refer to General Responses 4.3.1 through 4.3.3.

The BLM will consult as required with the U.S. Fish and Wildlife Service regarding federally listed endangered species. The Project site is outside the known geographic range of the desert tortoise and would not affect desert tortoises or designated critical habitat (Draft EIR/EIS p. 3.5-34 and Appendix

C-1 p. 9). The Project site is well outside mapped Desert Tortoise Recovery Units and proposed Desert Wildlife Management Areas as mapped in the Desert Tortoise Recovery Plan (Desert Tortoise Recovery Team 1994, pp. 23 and 39-42). The proposed Project would not conflict with the Desert Tortoise Recovery Plan or necessitate consultation with the U.S. Fish and Wildlife Service regarding desert tortoise.

Comment 19-12:

Response: There are no impacts to the desert pupfish. Please refer to response 19-3 above. Also see General Response 4.3.2.

Comment 19-13:

Response: No action alternative is included in the resource sections and Volume I, Section 2.6, Alternatives to the proposed action, page 2.6-2 of the Draft EIR/EIS.

Letter 20



"Edie Harmon
(private)"
<edie@sierraclubsan
diego.org>

07/10/02 08:20 PM

To: "Lynette_Elser (E-mail)" <Lynette_Elser@ca.blm.gov>, "Lself
(E-mail)" <lself@ca.blm.gov>
cc:
Subject: US Gypsum Scoping letter and exhibits for BLM's NOI

Dear Linda and Lynette:

Please find attached copies of the Sierra Club/DPC/CBD/CWC Scoping comments on the US Gypsum quarry and wallboard factory expansion projects and a set of faxed copies of the Exhibits which are maps. As noted in the letter, these comments are in addition to the NOP Scoping comments submitted to Imperial County earlier this year.

We believe that because environmental review has not been completed, that factory and quarry operations must be scaled back to the levels that existed prior to the original 1998 proposal to increase operations for environmental review to be meaningful and in the spirit and intent of both NEPA and CEQA. This is especially relevant at the quarry because it is entirely within critical habitat for the Peninsular bighorn sheep, and for the factory because it has been exporting potable groundwater from a sole source aquifer at locations between two small residential communities.

20-1

Pursuant to my phone conversation with Lynette earlier today, I will be pleased to provide original copies of the maps if the faxes are unclear. Exhibits 119 and 120 are color computer generated maps and much information may not be clear from faxed copies.

Thank you for the opportunity to share our concerns related to the US Gypsum expansion projects, and a very special thanks for BLM's role in facilitating a tour of the Fish Creek quarry area.

The letter is Word Perfect 6.1 for windows.

Edie



93622cea00.tif NOI-7502.WPD

RECEIVED

MAY 26 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Sierra Club, San Diego Chapter
Serving San Diego and Imperial Counties
3820 Ray Street, San Diego CA 92243
phone 619-299-1743, fax 619-299-1742

Center for Biological Diversity
P. O. Box 493, Idyllwild, CA 92549
phone: 909-659-6053, fax 909-659-2484

Desert Protective Council
P.O. Box 3635
San Diego, CA 92163
phone: 858-565-9582

California Wilderness Coalition
6427 Mesquite Ave. Suite F
29 Palms CA 92277
phone: 760-361-4738

July 9, 2002

SC/DPC/CBD/CWC **Exhibit #118 ****

Greg Thomsen, Field Manager
Bureau of Land Management
1661 South 4th Street
El Centro, CA 92243

E-mail: lself@ca.blm.gov;
lelser@ca.blm.gov

Dear Mr. Thomsen:

Re: NOI for preparation of an EIS for proposed expansion of the United States Gypsum wallboard facilities at Plaster City and Fish Creek Quarry in Imperial County CA (CACA-44014)
(* Document identification will be continuous from 2002 Scoping submissions to Imperial County for USG Expansion project.)

1 We appreciate the opportunity to have had a visit to the quarry prior to submitting these comments. Our understanding of quarry issues has benefited from that visit. Many thanks to the BLM staff who helped make the tour a possibility. As requested these NEPA NOI comments supplement the three bound volumes previously submitted to County of Imperial for its CEQA NOP Scoping process by Sierra Club, Center for Biological Diversity and Desert Protective Council. Hopefully, these NOI Scoping comments will not duplicate previously submitted concerns.

US GYPSUM (USG) EXPANSION PROPOSAL:

2 According to BLM's NOI, the US Gypsum's expansion and modernization project:
"consists of construction of new buildings, a doubling in wallboard production by removing one operating production wallboard line and installing a new state-of-the-art high speed line, and increased mining of gypsum from 1.1 million tons per year (mty) to approximately 1.9 mty on land reserves owned and mined by USG. The project also includes expanding existing and planned quarry areas. To accommodate the expanded operations, water usage will increase from 400 acre feet per year (AF/Yr) to a minimum of 767 AF/Yr." (BLM 4/25/02 NOI at p.2.)

US GYPSUM EXPANSION MAPPING ISSUES.

3 The NOI's Vicinity Map for the proposed project is almost ten years old! The map is inaccurate and inadequate to disclose proposed US Gypsum expansion projects' vicinity in western Imperial County CA. The "vicinity map" is dated 28 Oct 92 and is woefully out of date and fails to depict the location of any BLM or US FWS special management areas. Not even the map's Naval facilities boundaries are correct any more. See the 1998 BLM State Parks Desert Access guide El Centro map for the correct military boundaries.

20-2

4 It takes all four large BLM/California State Parks 1998 Surface Management Status Desert Access Guides, Borrego Valley, El Cajon, El Centro, and Salton Sea maps to learn the location of

- (a) the BLM Fish Creek Wilderness Area which surrounds much of the quarry on the east, south and west, and borders on the quarry and four claims for patent application CA 24537 (depicted on a BLM patent application map) (See Exhibits 119, and 120)
- (b) three Areas of Critical Environmental Concern (ACECs): West Mesa, Yuha Desert, and San Sebastian Marsh/San Felipe Creek, with endangered wildlife species and a species currently undergoing listing review, (Exhibit 121, 122, 126)
- (c) and to learn that the railroad from the quarry passes through Anza Borrego State Park, BLM's West Mesa ACEC, West Mesa FTHL MA, and Navy Target #103, (Exhibits 121, 124, 126) and borders the fish Creek Wilderness Area (Exhibit 119)
- (d) that the US Gypsum patented claims for the Shoveler Annex border the Carrizo Badlands State Park Wilderness Area and are about 1/8 mile from the Vallecito Mountains State Park Wilderness Area. (Exhibit 119)

20-3

5 It takes additional maps from USFWS to find the location of the designated Critical Habitat for the Peninsular Bighorn Sheep, within which the entire quarry operation is located, and Critical Habitat for the endangered desert pupfish which is down-gradient in the watershed from the Fish Creek Wash in the State Park to the north of the direction in which the quarry proposes to expand.

20-4

6 The attached two computer generated maps of the US Gypsum Fish Creek quarry area disclose the relation of the US Gypsum quarry, its pending patent application claims and the inactive National Gypsum lands in relation to the various State and Federal lands with special management responsibilities. Boundaries are computer generated with data sources from State and Federal agencies with patent application claims from BLM patent application map for CACA 24537. The USG Fish Creek Quarry area is entirely within designated critical Habitat for the Peninsular Bighorn sheep. The maps are to be considered together. Exhibit 119 discloses the patent of land ownership and wilderness areas, the second map, (Exhibit 120) is the underlying base map/topographic features depicting the quarry lands and the patent application claims along some major portions of the wash, all boldly identified as being entirely within the designated Critical Habitat for the Peninsular Bighorn Sheep. During the 6/27/02 Fish Creek Quarry tour, we understood that USG staff stated an intent to expand operations into the floor of the wash itself in addition to alluvial fans.

20-5

7 It takes another set of maps to find the location of parts of the project in relation to the West Mesa Flat-tailed horned lizard (FTHL) Management Area (MA) and the Yuha Desert FTHL MA that were designated as part of the Conservation Agreement adopted in lieu of listing of the FTHL in 1997. (Exhibit 123.) NOI text and map fail to disclose the location of the West Mesa ACEC and the Yuha Desert ACEC, both of which received this special land use planning designation from BLM to protect sensitive archeological, cultural resources and wildlife habitat for the flat-tailed horned lizard which is now again under consideration by FWS for listing as a threatened species. Both FTHL MAs and ACECs must be considered for impacts generated by activities along the BLM Rights of Way for railroad and water line. The railroad goes through the West Mesa FTHL Management Area (Exhibit 124), West Mesa ACEC and Navy Live Bombing Target #103 (Exhibits 121, 126), and the existing water pipeline from Ocotillo to Plaster city goes through what must be considered a corridor from the Yuha Desert FTHL MA to the West Mesa MA (Exhibit 123).

20-6

8 Neither the NOI text nor the out-dated 1992 vicinity map describes the location or hydrologic boundaries of the groundwater basins. It takes several maps to learn that the project will affect two separate groundwater basins. The quarry appears to be located within the western part of the Ocotillo Valley Groundwater Basin according to the Krieger & Stewart groundwater study submitted to the County by Allegretti Farms for their proposal to increase groundwater extraction to the west of the San Sebastian Marsh/San Felipe Creek ACEC and designated Critical Habitat for the desert pupfish (see :3/31/86 Federal Register V. 51, No. 61 pp. 10850-10851 for location of desert pupfish critical habitat). Quarry expansion verbal plans call for mining deep into the wash at the north end of the quarry just before the wash enters Fish Creek Wash.

20-7

9 The groundwater basin from which US Gypsum's Plaster City Plant is exporting potable groundwater from wells located between the residential communities of Ocotillo and Nomirage is the Ocotillo-Coyote Wells Groundwater Basin. The Ocotillo-Coyote Wells Groundwater Basin has been designated a Sole Source Aquifer by the US EPA (Exhibit 125) and includes much of the western part of the Yuha Basin ACEC (Exhibit 122). All this information can and should be included on a single "Project vicinity" map or series of maps and should have been included with a republished NOI because these maps are of crucial importance for responsible state and federal agencies to ascertain the location of varying aspects of a project which may be of special concern for an agency reviewing the project.

20-8

USG EXPANSION MINING ISSUES IN BLM's CALIFORNIA DESERT CONSERVATION AREA:

10 The BLM NOI fails to state the agency's continuing regulatory oversight role with respect to mining on claims under the General Mining Laws (43 CFR Part 3800, Subpart 3809 Surface Management) which remain in effect for "all patents issued after October 21, 1976 in the California Desert Conservation Area, except for any patent for which a right to the patent was vested before that date." (43 CFR 3809.2 (c).) How could it be possible that any rights to a patent could vest prior to any application for a patent by a mining claimant? In this case, no application for patent of the unpatented claims was made prior to 10/21/76. Indeed, the claims for some of the lands planned for quarry expansion have not yet been patented, and are, therefore, subject to BLM's 43 CFR 3809 regulations.

20-9

11 Of critical importance are the dates on which the claims locations were filed and dates on which patent application was made. When were the various mining and millsite claims filed? When were previously public lands patented? What does the language of the "right to a patent" under 43 CFR 3714.3 mean with respect to the 43 CFR 3809.2 (c) reference to the "vesting" of a right to patent prior to the enactment of the Federal Land Policy and Management Act (FLPMA) of 1976 Sec. 601 (f) [43 U.S.C. 1781] or if no application for patent was made until more than a decade later? Because FLPMA was enacted by Congress, BLM regulations must be interpreted in a manner consistent with the Congressional findings and intent.

20-10

12 **FLPMA Sec. 601 (f)** states:

601 (f) Subject to valid existing rights, nothing in this Act shall affect the applicability of the United States mining laws on public lands within the California Desert Conservation Area, except that all mining claims located on public lands within the California Desert Conservation Area shall be subject to such reasonable regulations as the Secretary may prescribe to effectuate the purposes of this Section. Any patent issued on any such mining claim shall recite this limitation and continue to be subject to such regulations. Such regulations shall provide for such measures as may be reasonable to protect the scenic, scientific, and environmental values of public lands of the California Desert Conservation Area against undue impairment, and to assure against pollution of the streams and waters within the California Desert Conservation Area. (FLPMA sec. 601. 43 U.S.C. 1781.)

20-11

13 Indeed, 43 CFR 3809.5 defines the term "Mining claim" as follows: "Mining claim means any unpatented mining claim, millsite, or tunnel site located under the mining laws. The term also applies to those mining claims and millsites located in the California Desert Conservation Area that were patented after enactment of the Federal Land Policy and Management Act of October 21, 1976." This Section also defines the terms mitigation, operation and reclamation. Of importance to BLM continuing management responsibility under 43 CFR 3809 is the definition for "Operations".

20-12

14 Operations means all functions, work, facilities, and activities on public lands in connection with prospecting, exploration, discovery, and assessment work, development, extraction, and processing of mineral deposits locatable under the mining laws; reclamation of disturbed areas; and all other reasonably incident uses, whether on a mining claim or not, including the construction of roads, transmission lines, pipelines, and other means of access across public lands for support facilities. (43 CFR 3809.5.)

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15 **FLPMA Sec. 103** [43 U.S.C. 1702] (c) defines multiple use as follows:

103 (c) the term “multiple use” means management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and non-renewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output. (FLPMA sec. 103 (c). 43 U.S.C. 1702.) (1999 *CDCA Plan 1980 as amended* at p. 5.)

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16 The 1999 *CDCA Plan 1980 as amended* pp. 28- 35 discusses the CDCA Plan’s Wildlife Element’s goals, actions, implementation and monitoring. BLM’s *CDCA Plan Final EIS Vol. E Appendix IX Wildlife* includes much discussion on the impacts of human activities, including mining and mining associated activities on wildlife and includes specific discussion about the sensitivities of desert bighorn sheep. The Peninsular Bighorn Sheep was included as a federally listed species. Its critical habitat boundary was designated by Interior’s FWS on 2/1/01 and included the entirety of the USG Fish Creek Quarry which was actively engaged in mining activities when critical habitat was designated, indicating just how important the area is to the sheep population. The EIS/EIR must address the significance of FWS, BLM’s sister agency in the Dept. of Interior, including the USG quarry in Critical Habitat. The EIS/EIR must also address how the critical habitat designation, like the segregation and withdrawal of public lands for another special resource value, necessitates a validity report prior to consideration of any patent approval and raises into question whether or not it is appropriate to consider expansion of mining activities on substantially undisturbed lands within critical habitat for what appears to be an extremely sensitive and currently vulnerable endangered species.

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17 The 1999 *CDCA Plan 1980 as amended* discussion of Application policies (2) specifically states, in part, that “Designation of “Critical Habitat” for a federally listed species may necessitate a change in multiple-use class designation.” The BLM use class designation maps are unclear for the area of the USG quarry. However, no matter what the original 1980 designation, BLM should be considering amending the multiple use class designation of public lands in the area to be consistent with the needs of affording the protection of the bighorn sheep population in its critical habitat, including the essential habitat for ewes which includes lands intended for USG quarry expansion operations. If such amendment is not sought, BLM must explain why and how its existing land use designation is conducive to implementing recovery of the listed species.

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18 The term “unnecessary or undue degradation” (43 CFR 3809.5 (3) and (4)) takes on special meaning in the CDCA and within designated critical habitat because special protection is afforded in the CDCA and if activities “Result in substantial irreparable harm to significant ... environmental resource values of public lands that cannot be effectively mitigated.”

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19 BLM’s 3809.400 et seq. regulations require the preparation by the applicant of a detailed Plan of Operations (POO) with the details of the operation 3809.401 (b) (2), and Reclamation Plan (3809.401 (b) (3) consistent with standards of 3809.420), Monitoring Plan, Interim Management Plan, reclamation cost estimates and financial assurances, etc. (See BLM’s 43 CFR 3800 regulations together with The Federal Register Final Rule of 10/30/01, *Federal Register* V. 66, No. 210, pp 54834 - 54862.)

20-18

20 Has there been a Plan of Operations submitted for the proposed expansion, together with a detailed revised Reclamation Plan? Have those documents already been submitted to FWS as part of the ESA Section 7 Consultation, or will they be prior to completion of the Draft EIS/EIR? What kind of mitigation measures could

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reduce the impacts on critical habitat for the listed Peninsular bighorn sheep? Absent the ability to meet the FWS standards described in the discussion of quarry wildlife issues, the quarry expansion into critical habitat should not be permitted.

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Con't.

Pending patent application CACA 24537 is an entirely separate BLM process, but focuses attention to the role of BLM regulatory responsibility for mining at the proposed Fish Creek quarry expansion site.

21 There are serious questions about any approval of the pending patent application based on a review of the maps, critical habitat information for the bighorn sheep and following a quarry tour where USG staff discussed future expansion plans for mining in the wash. (USG states that mining in the wash is not permitted at this time.) See additional discussion of patent application issues in quarry wildlife and FWS Section 7 consultation text below. Based on a quarry site visit and hearing expansion plans from USG staff, we cannot imagine what kind of "reasonable and prudent alternatives" might be recommended by USFWS to the type of mining proposed by USG for its expansion on both patented and unpatented lands in order to prevent "habitat destruction and/or habitat alteration" of critical habitat for bighorn sheep if the lands are mined. Gypsum is not a strategic or rare mineral. Therefore, we recommend that: (1) the Mining Plan of Operations and Reclamation Plan for expansion of mining into critical habitat be denied, (2) the patent application under the 1872 Mining Law be denied because of the location within critical habitat of an endangered species, and (3) mining not be permitted on those already patented or any claims in the wash.

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QUARRY OPERATIONS ISSUES: All comments below should be interpreted to refer to the increased intensity, hours and physical area of the proposed quarry expansion.

Quarry Wash and Groundwater issues:

22 Varying quantities of groundwater (up to 21,000 gal/day) for dust suppression at the quarry has been proposed. How much water is needed for quarry dust suppression? Will it be dust suppression on the roads and near buildings only, or will there be attempts to rinse dust from perennial vegetation which carries a heavy burden of gypsum dust, especially during prolonged drought?

20-21

23 How will increasing the amount of groundwater pumped at the quarry site affect the local portion of the Ocotillo Valley Groundwater basin? (7,000 gal/day x 360 days = 7.73 AF/Y; 15,000 gal/day x 360 days = 16.57 AF/Y; or 21,000 g/d x 360 days = 23.2 AF/Y for dust suppression.) Will dewatering that area have any effects on subsurface migration of groundwater in the Fish Creek Wash or to springs and/or seeps, either locally or downgradient? How is the local portion of the aquifer affected by faulting and the local geology? How does the application of potentially higher TDS groundwater for dust suppression affect nearby vegetation? Does use of such groundwater create surface buildup of salts which are deleterious to nearby vegetation?

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24 The presence of numerous deeply green perennial woody plants suggests that the roots of this vegetation were reaching some subsurface groundwater in a time and place where there has been no recent rain for surface infiltration. What is the underlying groundwater situation? This vegetation is not known to have roots that could go as deep as what USG suggested the water table to be. Are there lenses of shallower groundwater which may be located behind faulting or migrating along a fault within 100 or 150 feet of the surface? Have there been recent rains of sufficient duration or intensity for water to percolate downward or run off and infiltrate where there is vegetation with fresh green leaves?

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25 If the Allegretti's Krieger & Stewart groundwater studies are correct about there being two separate aquifers one above the other, what are the probable downgradient cumulative impacts (in addition to the Allegretti groundwater extraction and leaching) from USG's extraction for dust control and/or from extracting gypsum from up to several hundred feet below the floor of the wash? What are the potential further downgradient cumulative impacts of both sets of quarry and farming activities on designated Critical Habitat for the desert pupfish in San Sebastian Marsh and San Felipe Creek?

20-24

26 What are the potential effects of expanding mining from the above wash grade gypsum deposits to the stated proposed expansion plan to remove the wash overburden of about 100 feet and then mine the 100 - 150 foot

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thick gypsum deposits beneath the wash on both already patented lands and lands of the present patent application? Much of the major 4.25 mile wash in the long valley in which the USG Fish Creek quarry is located is already within patented lands owned by USG, but more than 1 mile of the wash is part of the pending patent application. Exhibit 120 reveals that 6 of the pending patent claims are located directly within the ephemeral stream in the unnamed US Gypsum wash that merges with the Fish Creek Wash just beyond the Anza Borrego State Park boundary to the north of the patent application claims.

20-25
Con't.

27 Of particular concern are the plans to mine the five northwest most patent application claims at the mouth of the wash adjacent to the state park boundary. USG staff pointed out that the gypsum deposits are pure enough that no residual material is not removed. Thus, mining in the wash would leave deep pits, even if the overburden were returned to the previously mined pit. Such a long deep pit would appear to trap water unless there were serious stream alteration efforts. These issues must be addressed in both the EIS/EIR and in a new more detailed Reclamation Plan. What kind of Reclamation would be required to reclaim a potentially 4.25 mile long deep pit running through the major channel of the valley's wash? How will vegetation and wildlife habitat be restored, how would the pits be recontoured to allow the wash to drain into the Fish Creek Wash? How could all the wash channels be redirected?

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Quarry Vegetation survey:

28 There should be a baseline vegetation survey of the quarry site, patent application claims and vegetation of the surrounding State and Federal public lands that would be impacted directly or indirectly by quarry operations. Deposition of particulates, dust, diesel exhaust, and nitrogenous compounds associated with blasting and gypsum removal activities are likely to have direct or indirect impacts on vegetation, photosynthesis, fertilization, forage and habitat quality both on and off-site. A plant survey should be done by botanists knowledgeable of the local flora and times when annuals and perennials are likely to be present or in leaf or flower for proper identification. Plant surveys must be done at appropriate times to determine the presence of both spring and fall annuals following rainfall. Doing botanical surveys at the wrong time of year will not reveal the diversity of plant life in the valley, hillsides of both the USG lands and surrounding public lands subject to off-site indirect impacts. When will the botanical surveys be conducted and by whom? Plant surveys should be reviewed by those familiar with the local flora, including botanists with Anza Borrego State Park which manages wilderness areas immediately adjacent to USG lands and proposed expansion areas..

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29 What is the vegetation or characteristics of the valley and hillsides which have made the area attractive to bighorn sheep over the years? How will this vegetation or characteristics be altered by expansion of mining into the wash?

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30 Are there any populations of plants endemic to soils with high gypsum deposits found at the quarry site or its environs? If so what and where are they? How would such plants or populations be impacted by increased mining activities, dust and/or mining in the wash? Populations of endemic species should be protected from disturbance.

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Quarry wildlife issues:

31 The USG Fish Creek quarry is entirely within USFWS designated Critical Habitat for Endangered **Peninsular Bighorn Sheep** (Exhibit 120). (See also; 2/1/01 Federal Register V. 66, No. 22, pp. 8650-8677, Critical habitat designation for Peninsular Bighorn Sheep and 3/18/98 Federal Register V. 63, No. 52, pp. 13134-13150 Endangered Status for Peninsular Ranges population of Desert Bighorn Sheep in Southern California.) The 2/1/01 Federal Register notice specifically identifies mining, and rights of way on federal lands among the activities that are "potentially affected by species listing. Under the listing of "Private Activities potentially affected by species listing only are: "Activities that affect bighorn whether directly (e.g., grading, overgrazing, construction, road building, mining, etc.) or through indirect effects (e.g., noise, edge effects, invasions of exotic species, or fragmentation) that requires a Federal action (permit, authorization, or funding). (FR 2/1/01 at 8665.)

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32 It is our current understanding that the patent application for claims CACA 24537 to transfer public

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lands managed by BLM to a private owner, USG, for the purpose of mining should require Section 7 Consultation because the mining claims are entirely within USFWS designated Critical habitat for the Peninsular Bighorn Sheep. Has this Section 7 consultation for the patent application already taken place as part of the patent application process? If not why not, or, if yes, when?

20-31
Con't.

33 Section 7 consultation is necessary because the federal approval of the patent application would result in the almost complete “destruction or adverse modification of” designated critical habitat of the Peninsular Bighorn Sheep on the BLM managed public land being sought by patent application CACA 24537. As the 2/1/01 Federal Register notice at p. 8656 states:

“Through this consultation [with the responsible Federal agency], we [FWS] ensure that the permitted actions do not destroy or adversely modify critical habitat.

When we issue a biological opinion that a project is likely to result in the destruction or adverse modification of critical habitat, we also provide reasonable and prudent alternatives to the project if any are identifiable. Reasonable and prudent alternatives are defined at 50 CFR 402.02 as alternative actions identified during consultation that can be implemented in a manner consistent with the intended purpose of this action, that are consistent with the scope of the federal agency’s legal authority and jurisdiction, that are economically and technologically feasible, and that the director believes would avoid destruction or adverse modification of critical habitat. Reasonable and prudent modifications can vary from slight project modifications to extensive redesign or relocation of the project. (2/1/01 Federal Register V. 66, No. 22, p. 8656.)

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The EIS/EIR should explain in detail the “reasonable and prudent alternatives” to the type of mining proposed by USG for its expansion on both patented and unpatented lands that would prevent “habitat destruction and/or habitat alteration” if the lands are mined.

34 Even though the patent application was submitted more than a decade earlier, pursuant to 50 CFR 402.16, BLM must reinitiate consultation if the patent application project was previously reviewed because the critical habitat was subsequently designated and BLM still retains the claimed land. Indeed, because the lands are in the CDCA, our review of FLPMA, the CDCA Plan as Amended and BLM’s 43 CFR 3800 convince us that BLM has considerable regulatory responsibility at the USG Fish Creek Quarry site. And, because the proposed USG quarry and factory expansion project on private lands involve a permit from a federal agency, the activities on private land “will also be subject to the Section 7 consultation process.” Both mining and rights of way are specifically identified in this FR Notice as federal actions subject to consultation with FWS. Accordingly, we question whether the biological opinion for the patent application been completed and is it currently available for public review? If not what is the status of such consultation related to the patent application?

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35 Has BLM authorized mining or milling activities on any unpatented USG mining claims or millsite claims since listing of the Peninsular Bighorn Sheep? Is there any mining or milling being conducted on unpatented claims where work was initiated prior to listing for the Peninsular Bighorn Sheep and/or prior to the 7/15/91 listing petition was filed with the FWS? 57 FR at 1837 includes the Proposed Rule to list the Peninsular Bighorn Sheep on 5/8/92.

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36 When were the existing USG private lands patented? Were any patents issued after 10/21/76 passage of FLPMA? If so, where? Has BLM authorized mining or milling activities on any unpatented USG mining claims or millsite claims since passage of FLPMA? Is there any mining or milling being conducted on unpatented claims where work was initiated prior to passage of FLPMA?

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37 How and to what extent might the increased amount of blasting, heavy equipment operation, crusher operation and increased number of train departures, arrival and loading impact the behavior of the ewes during breeding season? We are aware that part of the Shoveler Annex is within “essential” habitat for bighorn ewes and that individuals or groups of bighorn sheep have been observed by biologists in the wash valley in which the fish Creek Quarry is located. How might dust deposition and deposition of other particulates affect the quality and abundance of forage for bighorn sheep during the breeding and lambing season? Similarly, how would mining in

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the wash bottoms affect the quality and abundance of forage for bighorn sheep during the breeding and lambing season? We recommend no expansion of mining activities in the wash or removal of overburden to mine gypsum deposits underlying the valley itself. **20-36 Con't.**

38 Please provide mitigation measures and changes in the Reclamation Plan to reduce impacts to wildlife including the bighorn sheep. **20-37**

39 During the quarry tour it appeared that portions of the alluvial deposits on the west side of the drainage above the wash channels could be appropriate habitat for the **Flat-tailed horned lizard**. The habitat did not look unlike some of the habitat in the Yuha Desert FTHL MA or the West Mesa FTHL MA. Have FTHL surveys been conducted in this area? If so, with what results? If not, it is suggested that such surveys be conducted at the appropriate time of year. If this is FTHL habitat, it appears less impacted by vehicles and other surface disturbing activities than habitat in the two other mentioned FTHL MAs. Section 7 Consultation should also be required for the FTHL which is undergoing listing review requested by FWS for the second time because a portion of the railroad ROW goes through the West Mesa FTHL MA, a MA area that would likely be designated as Critical Habitat if and when the FTHL is listed as threatened. **20-38**

40 There should be yet one more Section 7 consultation related to the endangered desert pupfish and the cumulative impacts of mining and agriculture on its critical habitat and water resources essential for maintenance of that critical habitat. **20-39**

41 What wildlife and vegetation are found in the drainages leading into the quarry area now being actively mined? We were unable to visit this area during the quarry site because of the late date and heat. How are the vegetation and wildlife of the other drainages to the east of the current mining area affected by mining activities. If there are birds of prey or colonies of bats in the area and/or ESA listed or potentially listed birds or bats using the area, how would they be impacted by increased hours, intensity and physical areas of mining. Please identify mitigation measures intended to reduce those impacts, especially impacts on listed species or species of concern. **20-40**

Blasting Noise and vibrations:

42 The EIS/EIR must discuss the effects of increased blasting in terms of noise, nitrogen and sulphur by-products of blasting and the impacts of dust on the photosynthetic activity of nearby vegetation. Visitors at the quarry tour were instructed to wear ear protection, even on a day when the USG officials knew that no blasting would occur. Much wildlife has hearing far more acute than human hearing. How does the noise and vibration of blasting affect wildlife within range of the blasting and operation of heavy machinery at the quarry? How far does the sound travel to reach sensitive animal receptors? **20-41**

43 We were informed that blasting usually occurs between 3 and 4 PM. Does wildlife respond to the blasting noise differently at different seasons of the year, long days v. short days, breeding season, lambing season, hibernation or estivation seasons or times of day? During the summer, 3-4 PM would be during the heat of the day, but during the winter, the same times would be toward the end of the day. This may be the most convenient time for blasting in terms of human activities, but does time of day make a difference for wildlife, if so how? Would a different time for blasting or restricting blasting during bighorn sheep lambing season have important benefits for the endangered bighorn sheep? The EIS/EIR should contain alternatives to blasting times and procedures as mitigation measures if wildlife impacts warrant it. **20-42**

44 Please include a noise profile for blasting, heavy equipment operations, crusher operation and activities along the railroad line and show how far the noise and vibrations are perceived by different species of sensitive animal receptors. **20-43**

Blasting and Dust:

45 The quarry tour revealed a fine coating of what we presume to be gypsum dust covering surfaces including even cacti. How far does the dust from blasting carry? How far can the dust be carried by wind from **20-44**

the operation of heavy machinery or activities associated with crusher operations? Is blasting restricted during times of certain wind conditions or directions to minimize impacts on sensitive wildlife habitat? The EIS/EIR should discuss the role of dust in reducing photosynthetic activity, increasing vegetation vulnerability to disease or insect damage, influence on evapotranspiration, impacts on pollination, fruit and seed formation and production, predation and quality and abundance of both forage and shade for animal life from insects to lizards, birds and the endangered bighorn sheep. Are there qualitative differences in the health and vigor of perennials and annuals at different distances and in different directions from the blasting that can be attributed to dust deposition from blasting and quarry activities.

20-44
Con't.

46 What is the particle size of the gypsum dust? What are the biological effects of inhaling gypsum dust for humans and for wildlife? What are the biological consequences for wildlife of ingesting food coated with a fine layer of gypsum dust? How much asbestos is in the precipitated dust? (We have been informed that there was asbestos in some products from this quarry in the past.)

20-45

WALLBOARD FACTORY OPERATIONS ISSUES:

Factory Water issues:

47 How much water is required to produce a single 4 foot x 8 foot sheet of wallboard, of 1/2", 5/8", 3/4" or any other thickness?

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48 How many gallons of water are incorporated into each sheet of finished wallboard? How many gallons of water are evaporated off in the process of producing a single sheet?

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49 How many sheets of wallboard are produced per day or each size? How does ambient humidity affect the rate of production, quality of the end product, and/or the rate of water use?

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50 How many sheets of wallboard are discarded on the average/day to the waste pile to the south of the factory? How much water does this represent? Are there seasonal differences in the amount of wallboard discarded/day or /week? If so, why?

20-49

51 If the factory claims to be recycling waste or damaged wallboard, why does the waste pile appear to be continually growing? How much waste is produced/day and how much waste is recycled /day? In our opinion, waste wallboard represents wasted or non-beneficial use of a limited potable water resource.

20-50

52 What is the chemical basis for asserting a need to use potable groundwater from a limited sole source aquifer rather than Colorado River water or treated Colorado River water for the manufacturing process? Two chemists with whom we spoke knew of no reason why Colorado River water could not be used in the manufacturing process. USG representatives have asserted otherwise, but never provided any technical reasons why Colorado River could not be used. What is the chemical formula for the manufacturing process? Please include all steps and reactions.

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53 What is the minimum quality of water needed for wallboard production? What is the quality of water that is used at other wallboard factories in the southwest, factories operated by any company?

20-52

54 How much water flows from the Ocotillo-Coyote Wells sole source aquifer (by flowmeter measurements)? How much water reaches the factory site? How much potable water is lost at the facilities in Ocotillo, and how much lost through leakage from old or damaged pipes?

20-53

55 To what extent would Colorado River water need to be treated to achieve the minimum water quality required both wallboard manufacture? How much would it cost to treat Colorado River to use at the factory? What does this cost mean in terms of additional cost/sheet of wallboard?

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56 Imperial Valley Press of 7/3/02 includes an article on a proposal to clean Colorado River water to a TDS

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of 100 mg/L to supply urban areas. Clearly, the technology appears to be available, perhaps a big investment, but on a smaller scale, far better than reliance on export from a sole source aquifer. This technology or something similar could be used by USG to treat Colorado River water supplied by IID from the Westside Main Canal. This must be evaluated as an alternative for water use at the factory.

20-55
Con't.

Water pipeline through BLM Right of Way:

57 If there are to be any repairs to the water pipeline from export wells in the Ocotillo-Coyote Wells Sole Source Aquifer through a BLM right of Way (ROW) they should be done with **no-dig technology**. There are a number of companies with information on the Internet which describe their products and the process for “trenchless reconstruction, cured-in-place pipeline rehabilitation” otherwise known as the “no-dig pipelining system”. (See: “no-dig.com”.) Two companies, Inpipe Liner Sweden AB and National Liner have informative websites. For pipeline construction from the West Side Main Canal to the Plaster City factory (less than half the distance from Ocotillo to the factory) should also be done using a variation of the no-dig technology that was used to place the natural gas pipeline under the Colorado River, under canals and under the Interstate 8 for the pipeline from the NE part of Imperial County to Mexico.

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58 Environmental protection is an important consideration when it comes to preventing any additional habitat fragmentation between the Yuha Desert FTHL MA and the West Mesa FTHL MA, so no-dig technology is important in minimizing the cumulative impacts of any pipeline in addition to the impacts from the fibre optic cables. Another benefit of using the no-dig pipeline technology is to eliminate additional surface disturbance from trenching. Additional trenching would disturb more of the surface crust and ultimately result in increased probability and potential for wind blown sand and particulates already coming from the Ocotillo/Nomirage area.

20-57

Possible Cogeneration Facility:

59 During the NOI Scoping Hearing, USG mentioned for the first time construction and use of a possible “Cogeneration facility for heat and power”. No additional details were provided at the public meeting. Why was this never earlier disclosed to either the County or BLM or the public? How can the public or responsible State and Federal agencies provide any meaningful comments on an aspect of the expansion proposal which is not disclosed in writing or prior to the public scoping meeting? Where is such a facility proposed? What size or capacity is the cogeneration plant? What are the water and fuel requirements? What is the overall purpose?

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60 We presume that the cogeneration facility would have as a primary purpose the reduction of salinity of Colorado River water to be used at the Plaster City Wallboard Factory. This is because the export of potable groundwater from the EPA designated Ocotillo-Coyote Wells Sole Source Aquifer for cogeneration of heat and power for industrial purposes at any site not overlying the potable aquifer itself is completely unacceptable and should not be considered a reasonable beneficial use of a limited groundwater resource under the California Constitution Article X, Section 2.

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Dust control at the factory site:

61 Dust control at the factory site must be improved. Every time we have passed the factory site, there has been what appears to be an unacceptable level of fugitive gypsum dust in the air and blowing off-site. This represents a cumulative impact in addition to the heavy particulate load blowing in from sand and gravel quarries and cleared vacant desert land the Ocotillo/Nomirage area during periods of even moderate winds. Off road vehicle activity in the Plaster City Open Area also adds to the cumulative particulate air pollution at and to the east of the factory site at Plaster City. Whatever measures have been implemented to date appear to be inadequate. Additional mitigation measures must be added. Remember that in addition to biological resources on public lands, there is a nearby involuntary human population at the Centinella State Prison.

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62 **RECLAMATION PLAN AND SMARA COMPLIANCE** should have increased oversight from and unannounced inspections by staff from the CA Dept. of Conservation’s Office of Mine Reclamation (OMR). Because of their greater experience and expertise that OMR staff is better able to assess what constitutes successful reclamation, revegetation and recontouring, and the success or lack of successful compliance with the various reclamation standards, particularly revegetation efforts. For SMARA compliance to be meaningful and

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to instill public confidence, it is imperative that all quarry inspections be unannounced and unscheduled.

20-61
Con't.

63 Any Reclamation Plan Revisions must require reclamation for all previously mined areas, whether or not the mining was done prior to the requirements for reclamation.

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BANKRUPTCY:

64 The EIS/EIR should include a discussion of USG's Bankruptcy filing, explanation of why or how a company filing for protection from implementation of the Judgement of the Superior Court consistent with the decision of the Appellate Court should be considered financially able to meet the financial assurance and bonding requirements required for mining activities at the quarry? Discussion should explain the timing of the bankruptcy filing after completion of factory construction for this very expansion project after environmental review was ordered by the Court. SEC filings do not appear different during the several years preceding the filing for bankruptcy. Since USG has filed for bankruptcy (this is at least the second time of which we are aware), what kind of assurances would BLM or the State Office of Mine Reclamation or Imperial County have that this corporation would or could fulfill its Reclamation and/or mitigation obligations if a new or revised Plan of Operations and new or revised Reclamation Plan were to be approved? USG's track record with regard to its financial obligations does not appear to be good. Full financial assurances should be in a non-refundable, irrevocable letter of credit with a financial institution, not in mining claims, equipment, or other "assets" which could not be paid to a third party for implementation of failed reclamation or mitigation obligations.

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65 Please send a copy of the Draft EIS/EIR and notices for all public hearings to the representatives of the four organizations submitting these comments Sierra Club respectfully requests two copies of the Draft EIS/EIR together with a complete set of *all* technical appendices, one with technical appendices to the local address, the second to the San Diego Chapter Office.

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66 In addition to those individuals and organizations already on the mailing list for this USG expansion project, please provide copies of the Draft EIS/EIR to the following:
Roger Flynn, Esq., Western Mining Action Project, 2260 Baseline Road Suite 101A, Boulder CA 80302
David Huntley, Ph.D., Geology Dept., San Diego State University, 5500 Campanile Ave, San Diego, CA 92182
Tom Myers, Ph.D., Great Basin Mine Watch, 200 Bartlett St., Reno, NV 89512
Please provide Dr. Huntley and Dr. Myers with copies of the Hydrology Technical Appendices in addition to the Draft EIS/EIR.

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Thank you for considering our concerns.

Sincerely,

Edie Harmon, Desert Subcommittee, Sierra Club San Diego Chapter
local address: P.O. Box 444, Ocotillo, CA 92259; voice mail: 619-299-1744 x 8111

Nick Ervin, President, Desert Protective Council,
P.O. Box 3635, San Diego, CA 92163; phone: 858-565-9582

Daniel R. Patterson, Desert Ecologist, Center for Biological Diversity,
POB 493 Idyllwild, CA 92549; phone: 909-659-6053, fax 909-659-2484

Pat Flanagan, Conservation Associate for Desert District, California Wilderness Coalition,
6427 Mesquite Ave, Suite F, 29 Palms, CA 92277; phone 760-361-5430, fax 760-361-5449

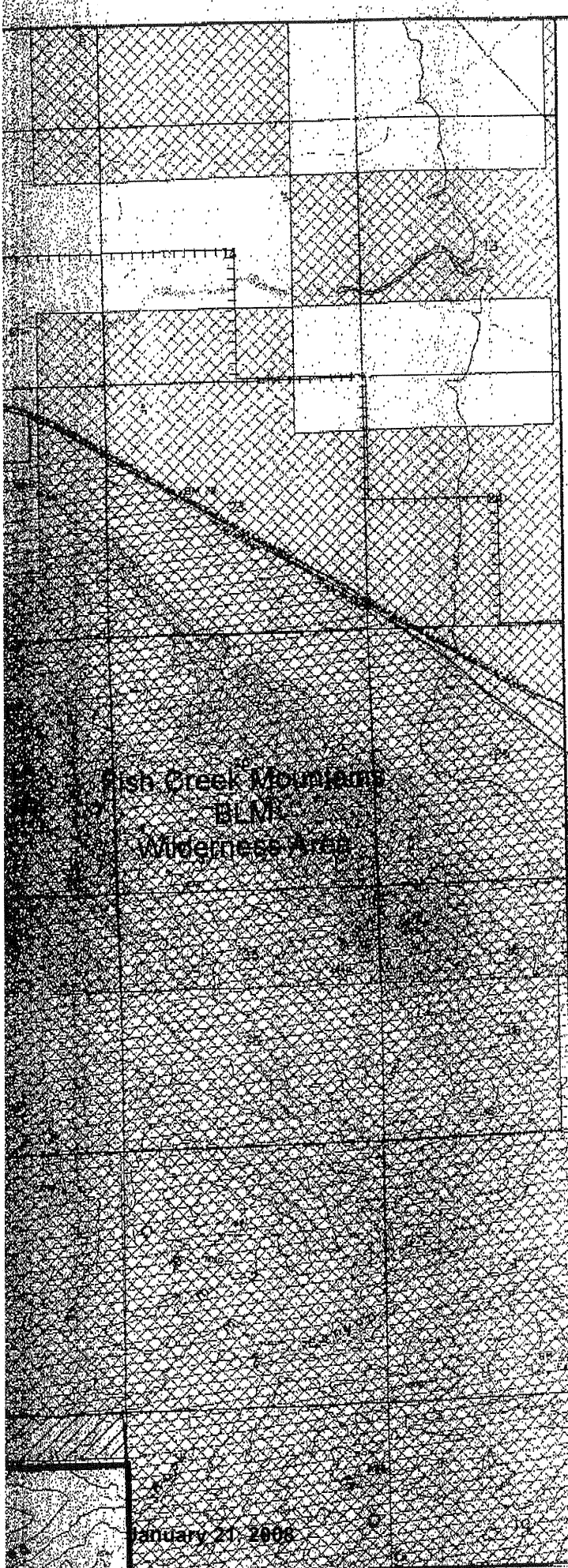
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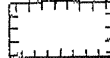
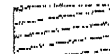
Exhibits:

- 117 6/2/02 Sierra Club letter re NOI and request for extension of deadline until after quarry tour
- 118 7/9/02 Sierra Club NOI Scoping comments
- 119 Map depicting "Gypsum Mine Expansion Proposal, Imperial County, CA" depicting state and federal land ownership, wilderness areas, US Gypsum property and patent application claims CACA 24537.
- 120 Map depicting "Gypsum Mine Expansion Proposal, Imperial County, CA, Entirely within Critical Habitat for Peninsular Bighorn Sheep", shows topographic features which were obscured by ownership information of Exhibit 119.
- 121 BLM 1998 portion of El Centro Map depicting locations of West Mesa ACEC & Navy Target #103
- 122 BLM 1998 portion of El Centro Map depicting locations of and Yuha Basin ACEC
- 123 FTHL Management Areas from FTHL 1997 Conservation Agreement, Fig. 6 at p. 68
- 124 West Mesa FTHL Management Areas from FTHL 1997 Conservation Agreement, Fig. 7 at p. 69.
- 125 Map depicting hydrologic boundaries of EPA designated Ocotillo-Coyote Wells Sole Source Aquifer
- 126 BLM 1987 Plan Amendment re West Mesa ACEC and multiple use class designation
- 127 Federal Register map of Peninsular bighorn sheep critical habitat
- 128 Federal Register map of desert pupfish critical habitat
- 129 AAA map of western Imperial County depicting wilderness areas, Plaster City, Fish Creek Quarry and railroad connecting the two.

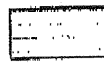
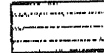
Gypsum Mine Expansion Proposal

Imperial County, CA


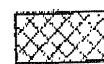
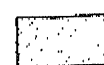

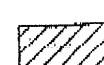



-  Bighorn sheep final critical habitat boundary-USFWS
-  BLM wilderness

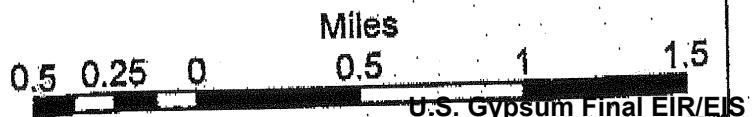
State Wilderness

-  Carrizo Badlands
-  Vallecito Mountains

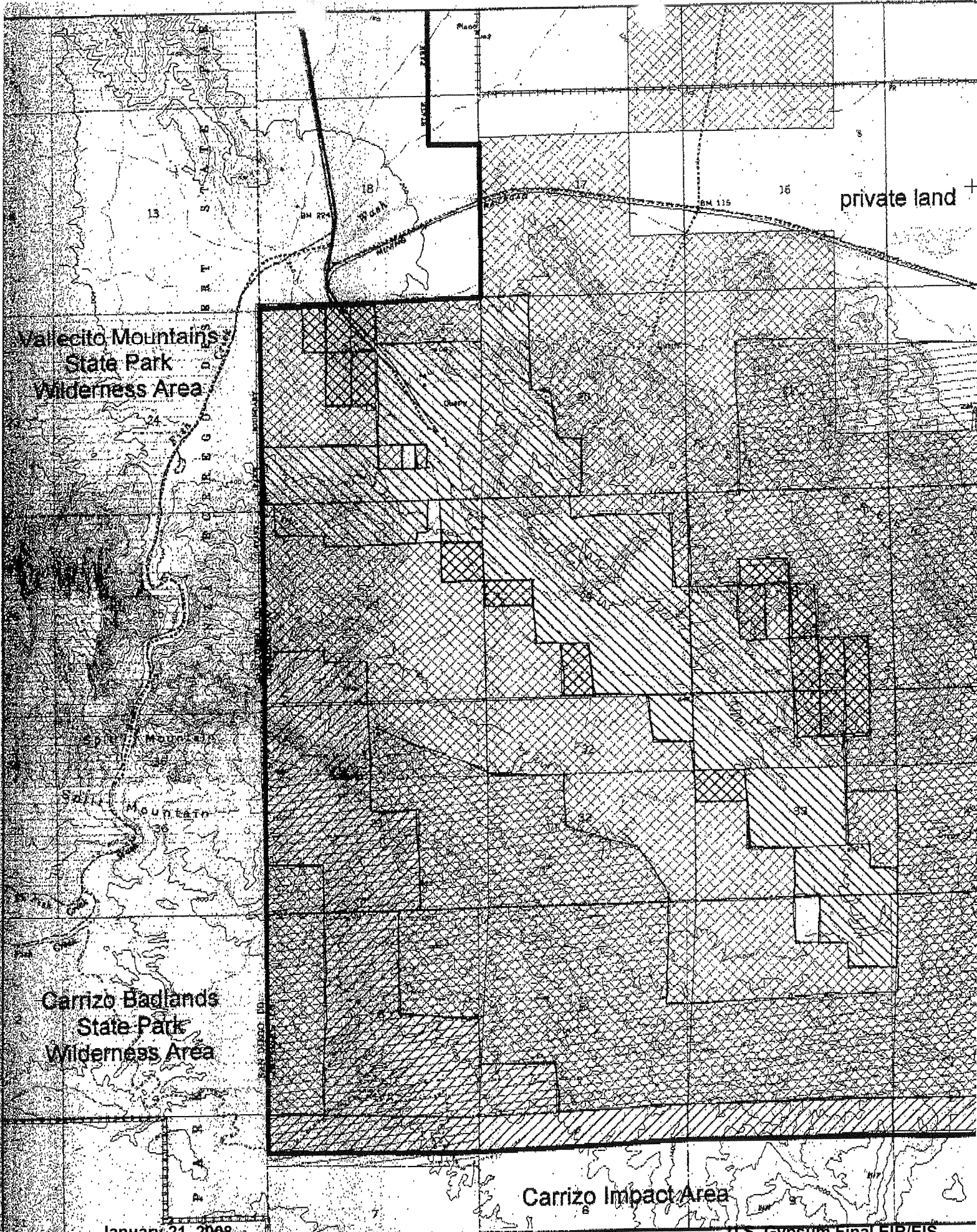
Property Owners

-  Anza-Borrego Desert State Park
-  BLM
-  BLM- ? future patent application?
-  BLM-patent application-current
-  National Gypsum
-  US Gypsum

Information sources:
 Imperial County Assessor's Office
 BLM Wilderness GIS Layer
 Anza-Borrego Desert State Park Gis Property Information
 USFWS Final Critical Habitat Boundary for Peninsular Bighorn sheep
 BLM: Patent Application Map for CACA-024563




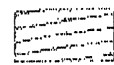
January 21, 2006



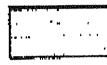
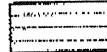
January 21, 2008

Gypsum Mine Expansion Proposal Imperial County, CA





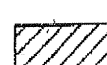
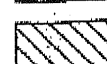
Entirely within Critical Habitat for Peninsular Bighorn Sheep

-  Bighorn sheep final critical habitat boundary-USFWS
-  BLM wilderness

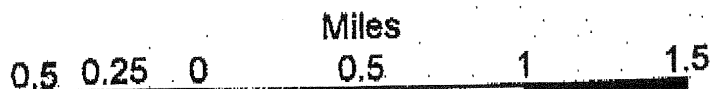
State Wilderness

-  Carrizo Badlands
-  Vallecito Mountains

Property Owners

-  Anza-Borrego Desert State Park
-  BLM
-  BLM- ? future patent application?
-  BLM-patent application-current
-  National Gypsum
-  US Gypsum

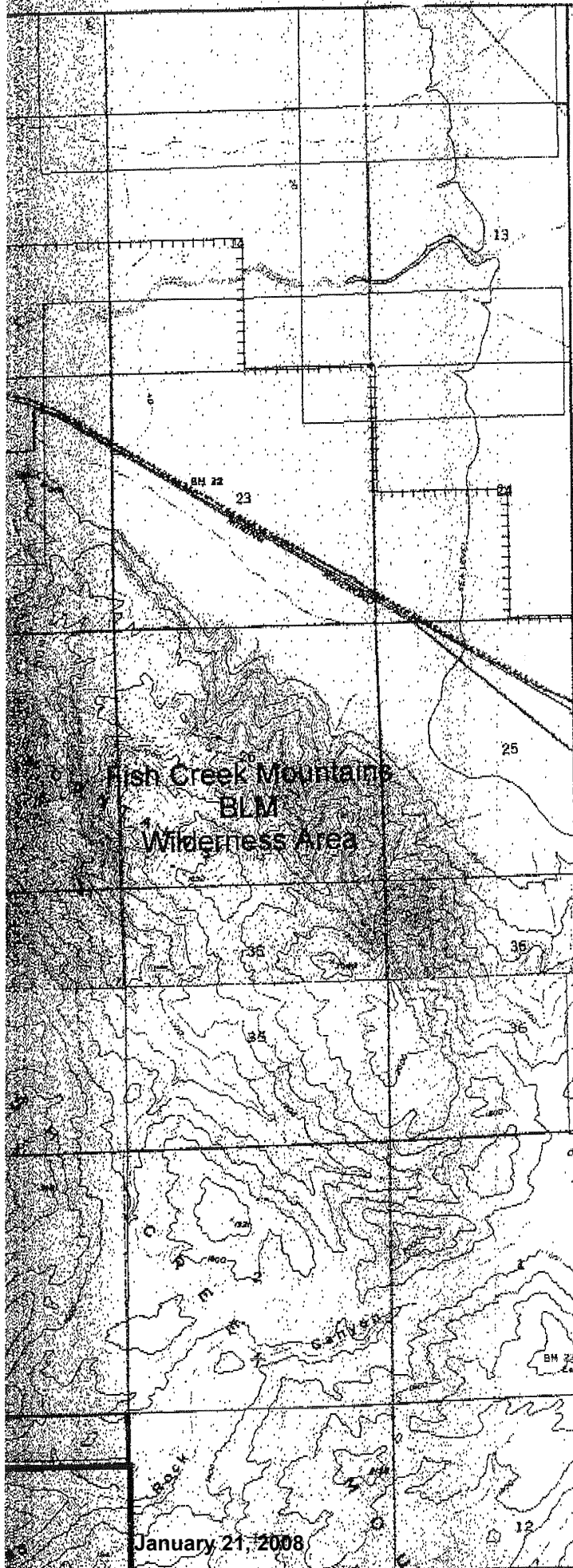
Information sources:
 Imperial County Assessor's Office
 BLM Wilderness GIS Layer
 Anza-Borrego Desert State Park Gis Property Information
 USFWS Final Critical Habitat Boundary for Peninsular Bighorn sheep
 BLM: Patent Application Map for CACA-024563

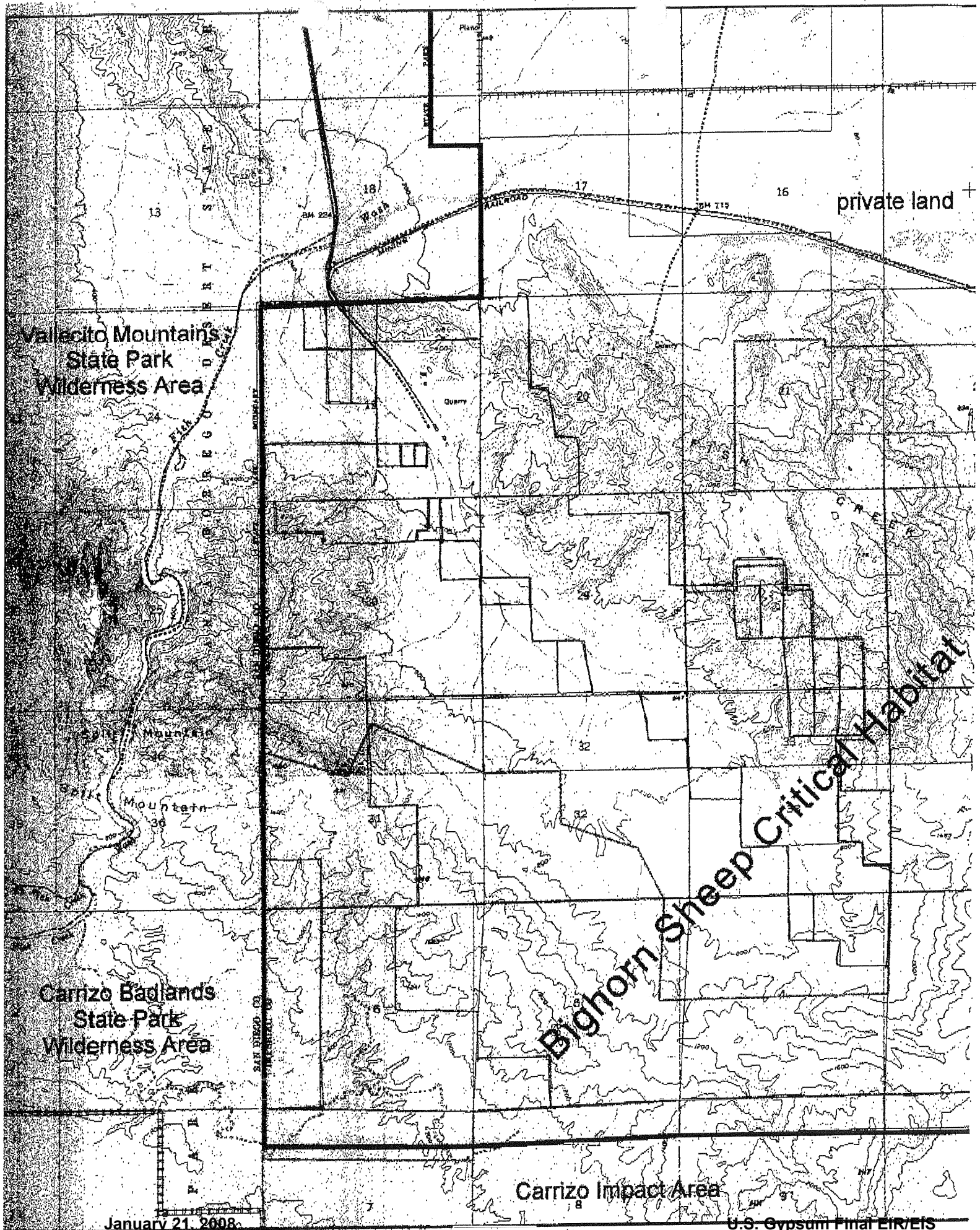


U.S. Gypsum Final EIR/EIS

Exhibit 12D

January 21, 2008

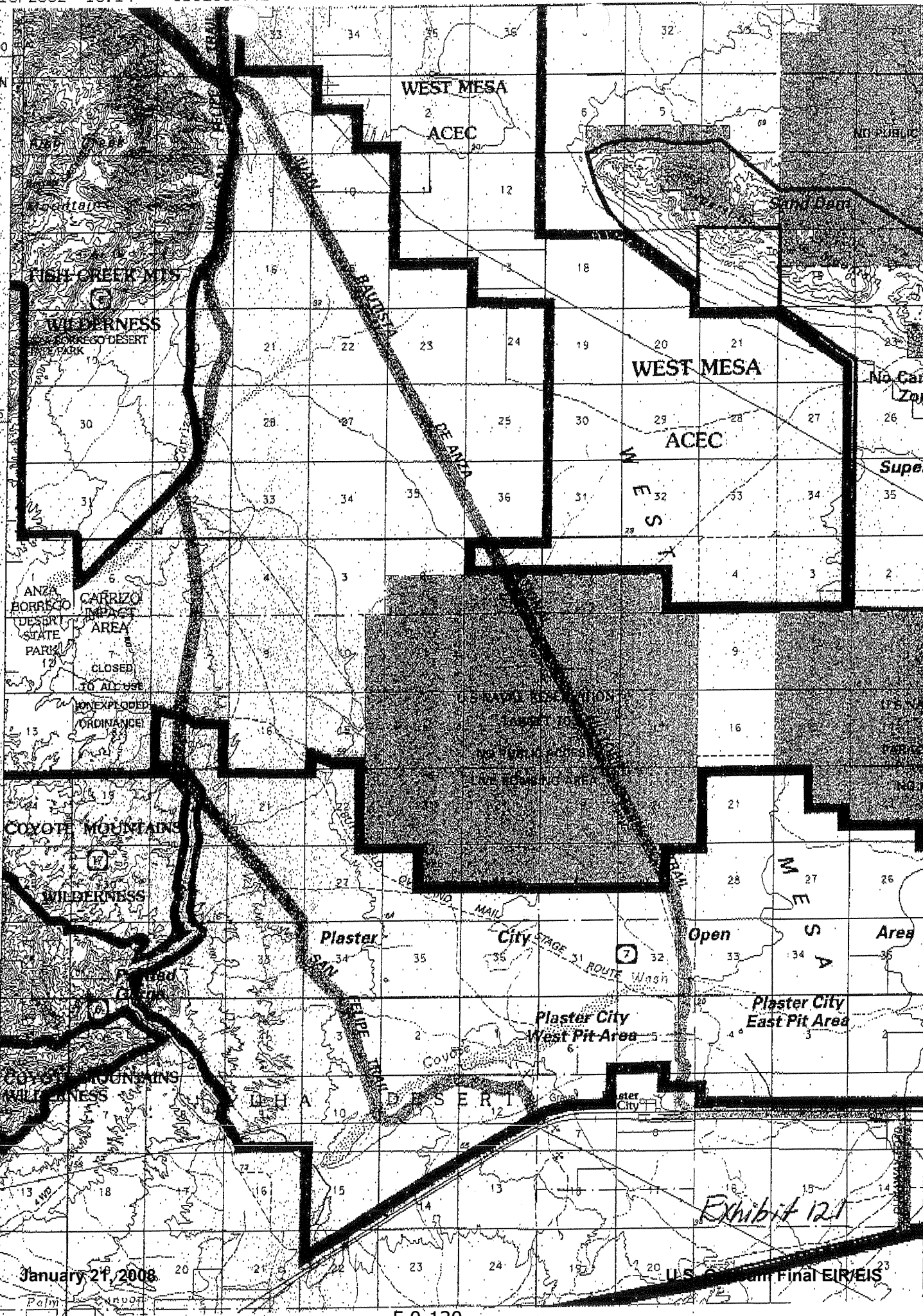




January 21, 2008

U.S. Gypsum Final EIR/EIS

deputy with Area ACEC & Navy Live Bomby F703 Target

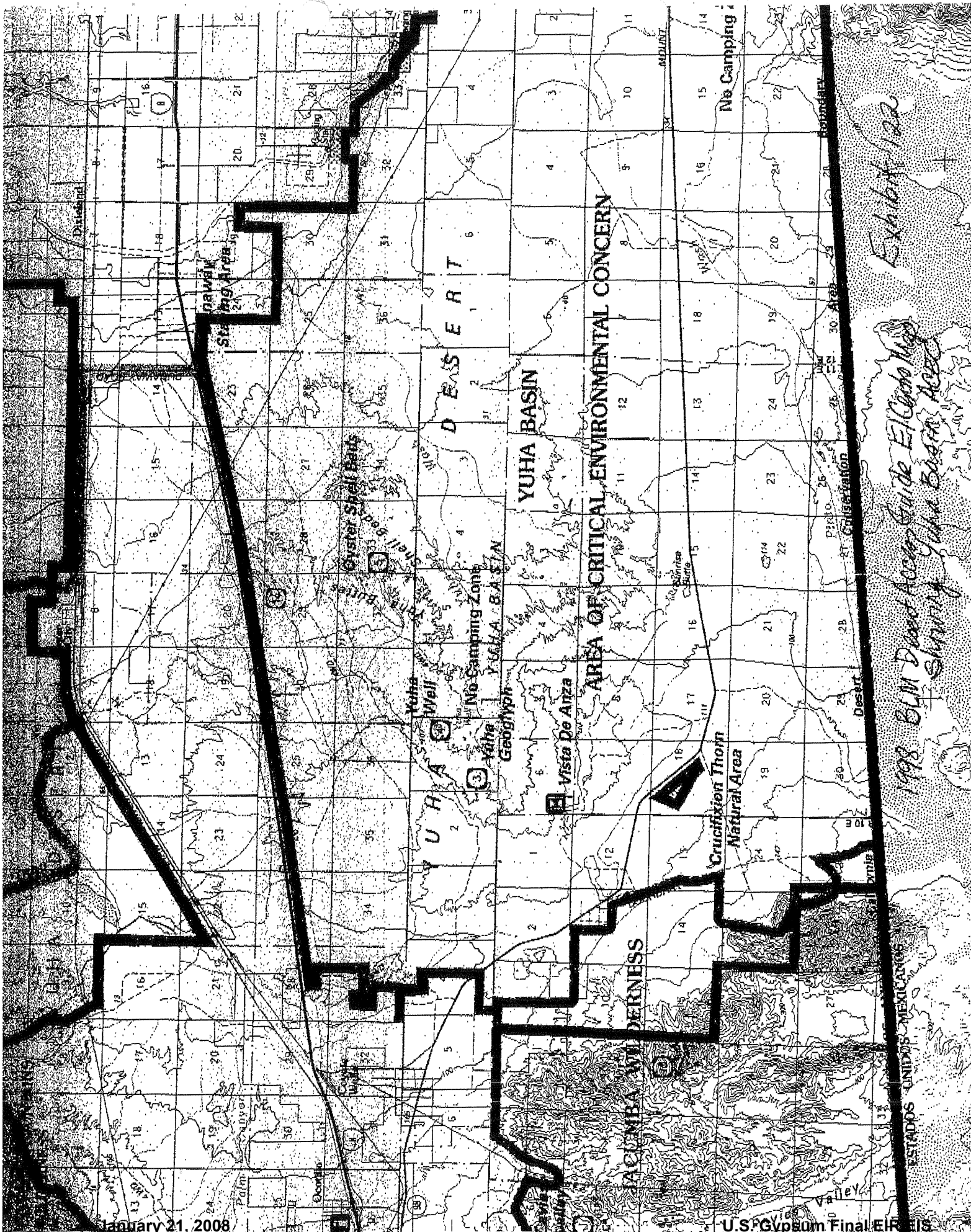


Julian
35 miles

January 2nd, 2008

Exhibit 12.1

U.S. Court Final EIR/EIS



1998 BLM Draft Access Guide El Capo Mesa
Showing Yuma Basin Area
 Exhibit 122

January 21, 2008

U.S. Gypsum Final EIR/EIS

0-131

T16S

45

(EL CAJON)

200

54.0

T7S

175

1

ESTADOS UNIDOS MEXICANOS

from: 5/97 Flat-tailed Horned Lizard Rangewide Management Strategy: An Arizona-California Conservation Strategy

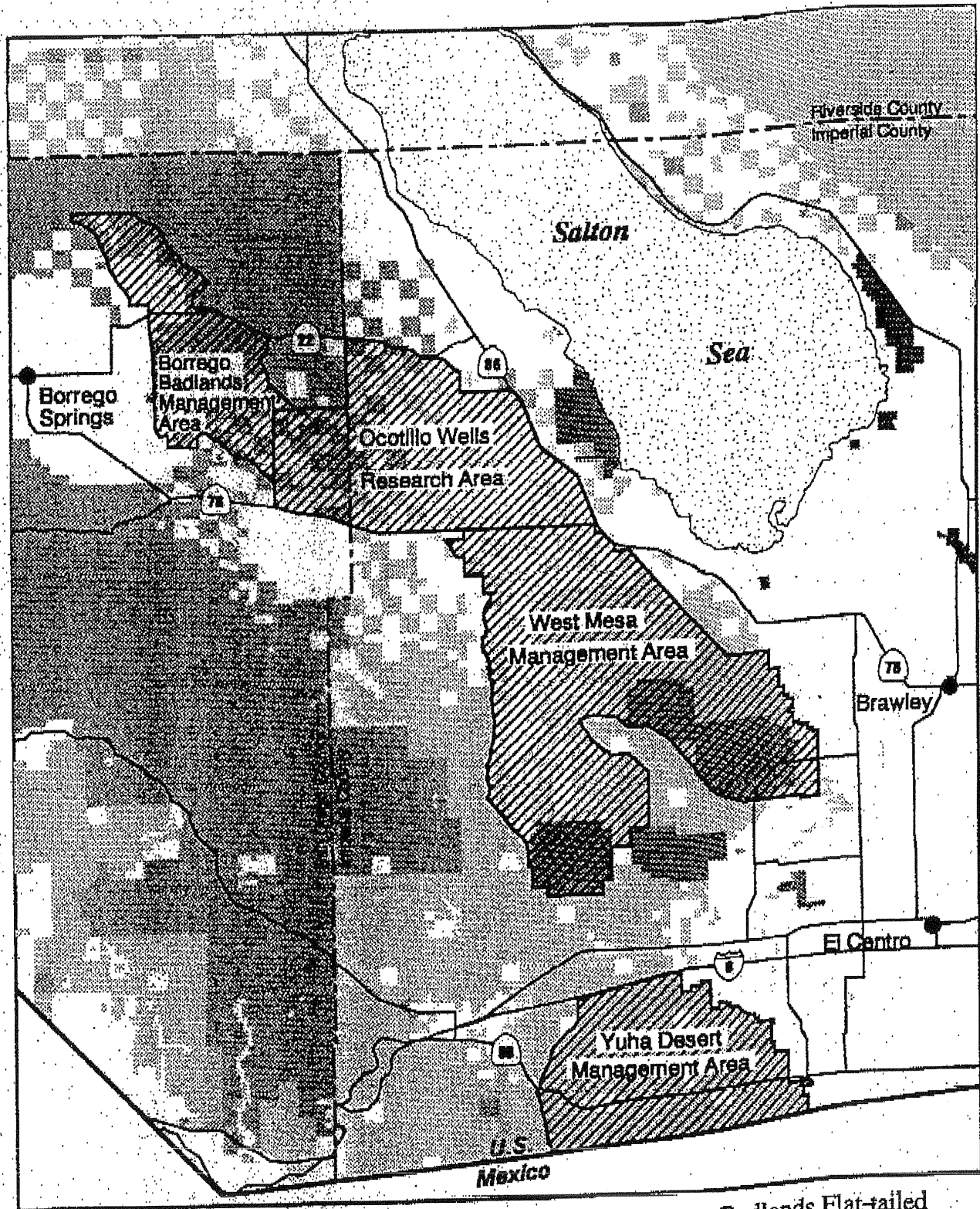
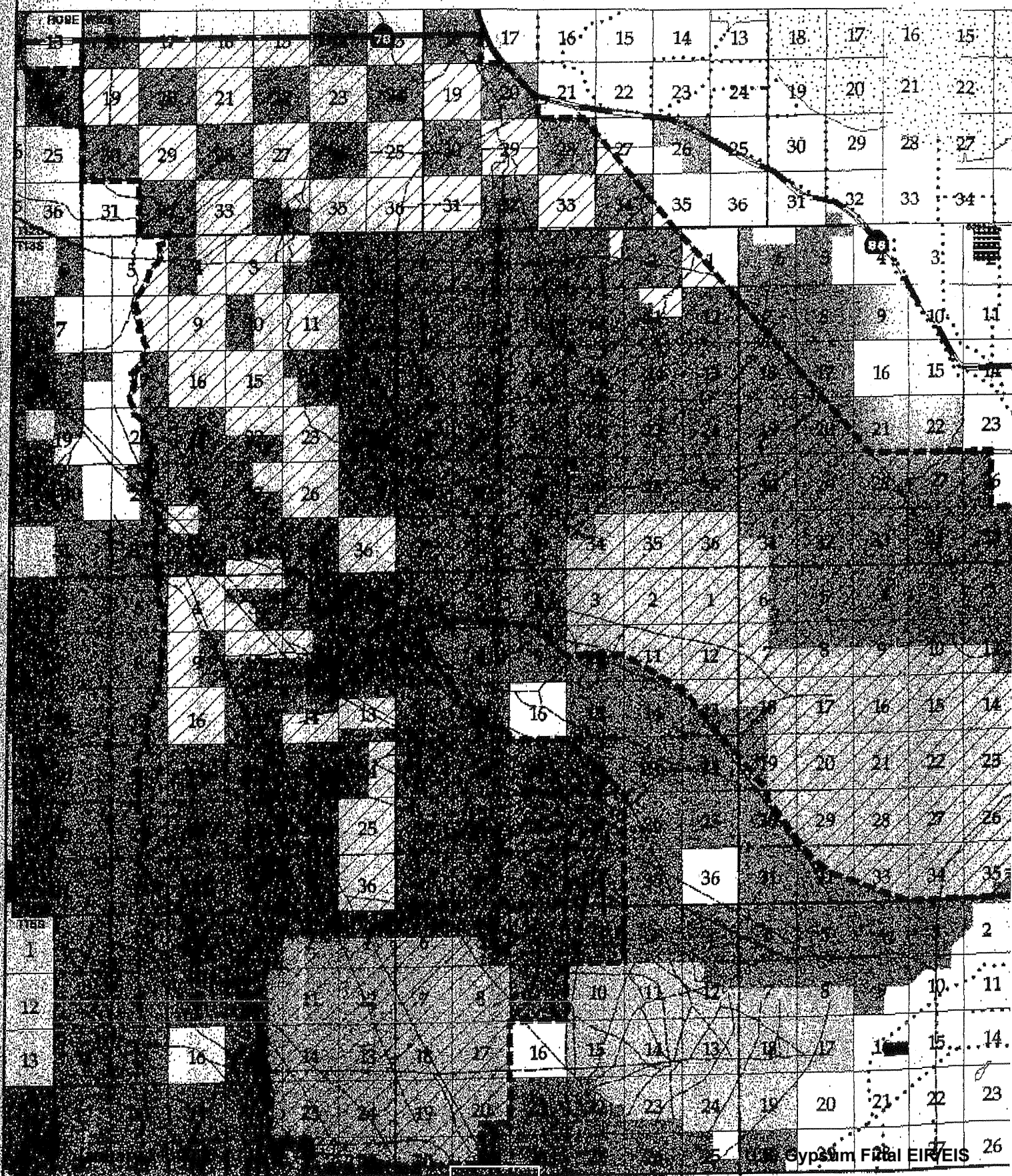


Figure 6. Map of Proposed Yuha Desert, West Mesa, and Borrego Badlands Flat-tailed Horned Lizard Management Areas and proposed Ocotillo Wells Research Area (One inch equals 7.9 miles; Mapscale 1:500000).

From: 5/97 Flat-tailed Horned Lizard Rangewide Management Strategy p 69.

Exhibit 124







Figure 7. West Mesa Management Area



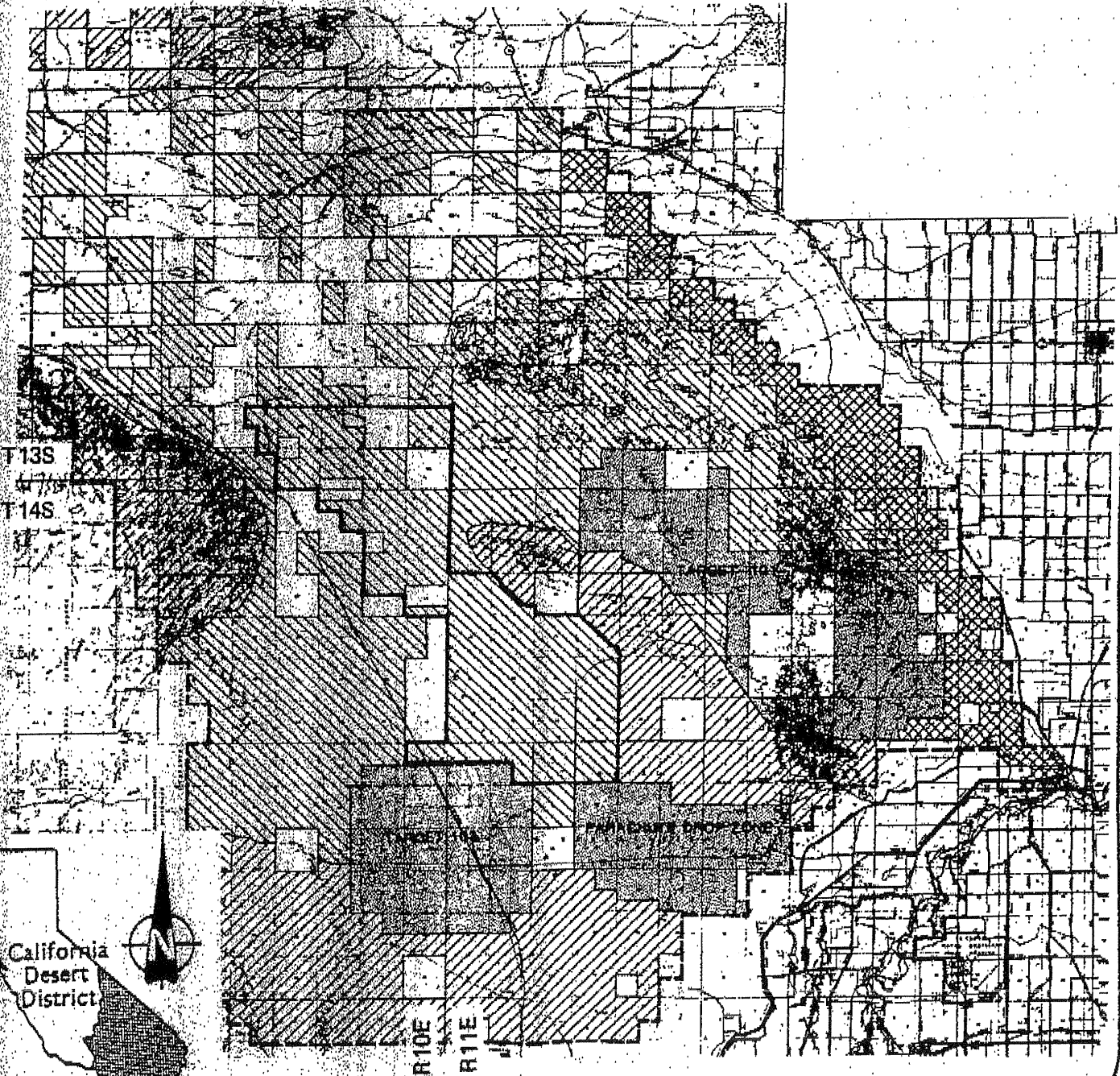
AMENDMENT 1

New ACEC-West Mesa (Imperial County)

LEGEND

- Study Area Boundary
-  Class "C"
-  Class "I"
-  Class "L"
-  Class "M"
-  Unclassified (Navy Withdrawal)
-  Patented Land

Proposed ACEC Boundary 

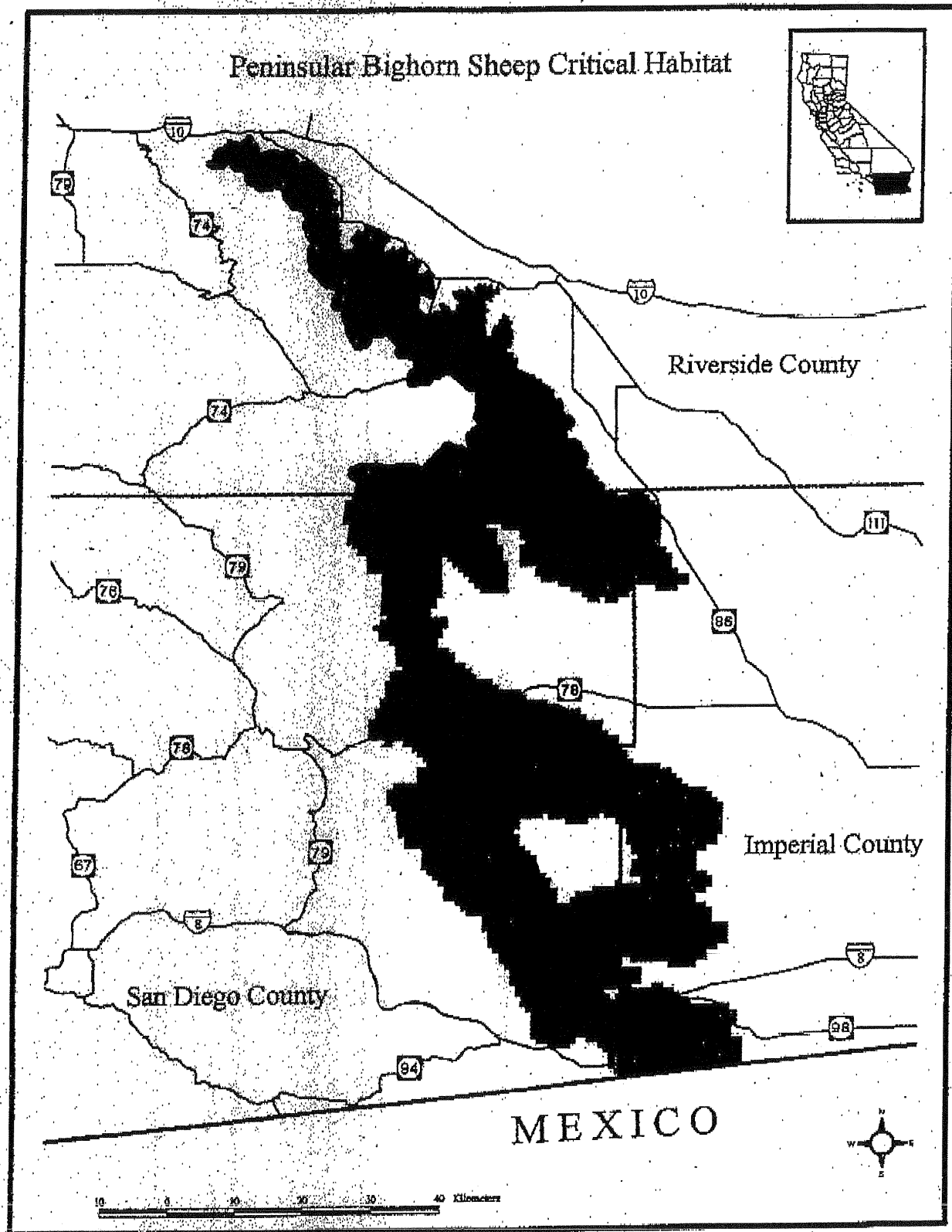


5.0-134

BLM 1987 ROD re West Mesa ACEC
January 21, 2008

*Showing Use classes and railroad from Plaster City
vicinity area & north the Use Classes.*

*Exhibit 126
U.S. Gypsum Final EIR/EIS
going through ACEC*



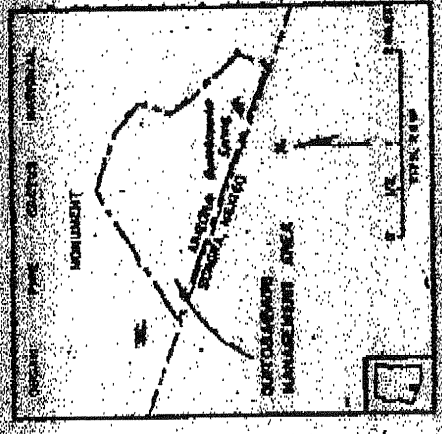
BILLING CODE 4310-55-C

Exhibit 128

Intersections of Hwy 77 and Hwy 99) upstream to the eastern boundary of Section 31, T12S, R10E, including three areas of the stream channel in T12S, R14E, Section 17, 18, and 19; T12S, R10E, Section 22, 23, 24, 25, 26, 27, 28, 29, and 32.

2. Carrizo Wash: Approximately 19 1/2 stream miles and 103 feet on either side of the stream channel commencing at the confluence of Carrizo Wash with San Felipe Creek upstream to the western boundary of N 1/4 Section 38; T12S, R10E, including those areas of the stream channel in T12S, R10E, Section 27, 28, and 30; Section 28.

3. Fiat Creek Wash: Approximately three-fourths of one stream mile and 170 feet on either side of the stream channel from the confluence of Fiat Creek Wash with San Felipe Creek upstream to the northern boundary of N 1/4 Section 32; T12S, R10E, including those areas of the stream channel in T12S, R10E, Section 29 and N 1/4 Section 32.



California Imperial County

1. San Felipe Creek: Approximately 87 1/2 stream miles and 103 feet on either side of San Felipe Creek or the stream channel commencing at the State Highway 94 bridge crossing (approximately 1/4 mile south of

§ 17.95 Critical habitat—fish and wildlife.

(e)

Desert Pupfish (*Cyprinodon maculatus*)

Arizona: Pima County

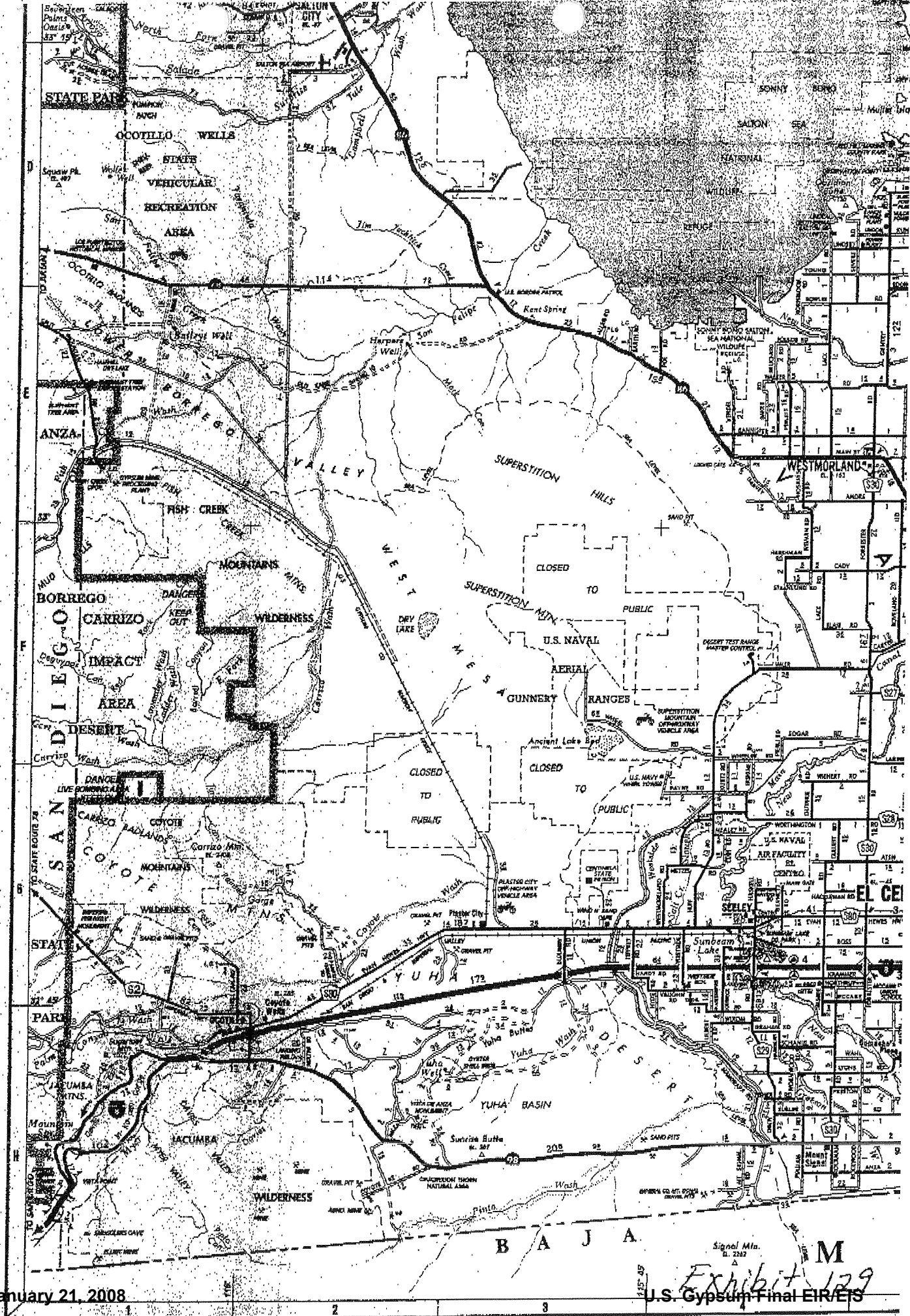
1. Chubascoyito Spring: Approximately 23 miles NNE of Lordsburg, Arizona in Oregon Pina Cactus National Monument, in T12S, R10E, and a 100-foot riparian buffer zone around the spring.

Federal Register / Vol 51, No. 61 / Monday, March 31, 1988 / Rules and Regulations 10851

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Constituent elements for all four areas designated as critical habitat include clean unpolluted water that is relatively free of exotic organisms, especially exotic fishes, in small slow-moving desert streams and spring pools with marshy backwater areas.

Dated: February 23, 1988.



January 21, 2008

5.0-137

Signal Mtn. 2242
 Exhibit 129
 U.S. Gypsum Final EIR/ES

Letter 20
Eddie Harmon, July 10, 2002

This letter is a 2002 response to the NOI for the proposed EIS to be prepared on the United States Gypsum Company Expansion/Modernization project, it predates this Draft EIR/EIS publication of April 2006 by three years and nine months. It is not a comment to the Draft EIR/EIS, it was resubmitted to the County in May 2006 for consideration as a comment to the Draft EIR/EIS. Comments to the NOI are not relevant to the contents of the Draft EIR/EIS. The letter was not modified, revised or referenced to the Draft EIR/EIS. Many of the comments are not relevant to the current comment procedure and are responded to with “comment noted.” When the comment can be referenced to a specific section of the Draft EIR/EIS the citation is provided. In some cases the issues are expressed in formal comment letters. These responses are also referenced.

Comment 20-1:

Response: Comment noted. The Draft EIR/EIS was published in April 2006 and circulated for comment. The operation was not halted or scaled back prior to publication. See General Response 4.3.1 regarding Peninsular bighorn sheep. See General Responses 4.3.4, 4.3.5, 4.3.6, and 4.3.7 concerning the use of water from the Ocotillo-Coyote Wells Groundwater Basin.

Comment 20-1(a):

Response: USG assisted in making the Quarry tour possible. The County and BLM appreciate the opportunity to visit the site as well.

Comment 20-2:

Response: Comment noted. The NOI is included in Volume II, Appendix A, Public Notifications A-2 federal notification, Notice of Intent.

Comment 20-3:

Response: Comment noted.

Comment 20-4:

Response: Comment noted. See General Response Peninsular bighorn sheep 4.3.1 and desert pupfish 4.3.2. Maps are provided in the Draft EIR/EIS as cited in discussions of Peninsular bighorn sheep and desert pupfish. The project components are spread over significant distances. One map showing all components cannot also provide area details. Smaller area maps allow for more details.

Comment 20-5:

Response: See Volume I, Section 3.5, Wildlife, in the Draft EIR/EIS and General Response Peninsular bighorn sheep 4.3.1. Property holdings within the Quarry including claim boundaries are clearly identified in Figure 2.0-6, page 2.0-19 of the Draft EIR/EIS. It is also described for the Quarry in the June 2003 Reclamation Plan. The Proposed Action is described in the Draft EIR/EIS and not reported verbal statements.

Comment 20-6:

Response: See Response to Comment 20-4. Flat-tailed horned lizard is addressed in Volume I, Section 3.5, Wildlife of the Draft EIR/EIS, with discussion beginning on page 3.5-16. Also see General Response 4.3.3.

Comment 20-7:

Response: The site hydrology is described in Volume I, Section 3.3, Hydrology and Water Quality of the Draft EIR/EIS. Two groundwater basins, Ocotillo-Coyote Wells for the Plant and another one for Quarry Well No. 3, are affected.

Comment 20-8:

Response: Comment noted. The Draft EIR/EIS and Final EIR/EIS contain descriptions of and maps depicting the “project vicinity.” The Ocotillo-Coyote Wells Groundwater Basin has served the Plant and Quarry operations, including the company village, swimming pool, irrigation and dust suppression, in some cases since the 1920s.

Comment 20-9:

Response: Comment noted.

Comment 20-10:

Response: Comment noted.

Comment 20-11:

Response: See FLPMA discussion, Draft EIR/EIS Volume I, Section 3.9, Land Use, page 3.9-4.

Comment 20-12:

Response: Comment noted.

Comment 20-13:

Response: Comment noted.

Comment 20-14:

Response: Comment noted.

Comment 20-15:

Response: See General Response Peninsular bighorn sheep 4.3.1.

As of August 3, 2006 the existing Fish Creek Quarry, proposed future areas of expansion, and a surrounding buffer zone covering a total of about 10,800 acres were removed from the critical habitat for the Peninsular Bighorn Sheep (PBHS). The removal of these areas from critical habitat resulted from an Amended Order Granting Motion for Approval of Consent Decree and Dismissal with Prejudice entered in U.S. District Court, Central District of California. 2006 (Case Number: EDCV 05-187 VAP (OPx). The critical habitat rule adopted by the U. S. Fish and Wildlife Service (Service) was vacated with respect to the Plaintiff's lands specified in the Consent Decree. The critical habitat designation will remain in place with respect to all other areas pending the completion of the revised rule by the Service. The Service agreed to reconsider the "critical habitat" designation for the PBHS and revise the rule based upon a revised consideration of the economic impacts, identification of the physical and biological features essential for the conservation of the species, and a redelineation of areas in which the essential features occur for the protection of the PBHS.

A "validity report" was completed by a BLM Mineral Examiner during the preparation of a Mineral Examination of unpatented placer mining claims on Public Land in Patent Application CACA #24563. The placer mining claims were located in 1985-1986. A Mineral Examination was requested from the BLM in December 1989. The application for patenting was submitted to the BLM on September 18, 1990 and the Final Certificate, First Half was issued on October 22, 1990. The Mineral Examination established that: (1) there is a valuable mineral (gypsum) present, (2) that USG properly established the presence of the mineral (gypsum) by drilling, surface sampling, etc. meeting the concept of "discovery", (3) that 10-acre aliquot portions of the unpatented placer mining claims that are not "mineral in character" were excised from the mining claims and were not clear listed for patenting (removed from the total acreage in the application), and (4) the mineral may be economically recovered using current technology and mining methods.

Comment 20-16:

Response: Comment noted. The Quarry is no longer within Peninsular bighorn sheep critical habitat. See General Response Peninsular bighorn sheep 4.3.1.

Comment 20-17:

Response: Comment noted.

Comment 20-18:

Response: Consistent with this comment a Plan of Operation was prepared and submitted to BLM in September, 2004. A Reclamation Plan was prepared and submitted in March 2003 and revised in June 2003. These submittals are consistent with local, state, and federal standards.

Comment 20-19:

Response: See Comment 20-18 above and General Response Peninsular bighorn sheep 4.3.1. The BLM has received a Draft Environmental Assessment for impacts to Peninsular bighorn sheep and is responsible for initiating consultation with U.S. Fish and Wildlife Service. See General Response 4.3.1.

Comment 20-20:

Response: Comment noted.

Comment 20-21:

Response: Comment noted. Water is used primarily for dust suppression at the Quarry, including on the Quarry roads as required by the Imperial County Air Pollution Control District. The proposed Project does not propose to wash dust from plants with water. Commenters opinion is noted.

Comment 20-22:

Response: The reader should refer to the appropriate sections of the Draft EIR/EIS Volume 1, Section 3.2, Geology, 3.3, Hydrology and Water Resources, 3.4, Vegetation, 3.5, Wildlife and General Response 4.3.2. There will be no dewatering of groundwater from Quarry Well No. 3. Impacts from Quarry Well No. 3 are addressed in Sections 3.3 and 3.5 and Appendix C-5 in Volume II, Draft EIR/EIS. No aquifers are affected by Quarry operations (see page 3.3-101, Volume 1 of the Draft EIR/EIS and Figures 3.2-1 and 3.2-3, Volume 1 of the Draft EIR/EIS). Use of water for dust suppression, even high TDS water will not adversely impact plants nearby. Water would be beneficial

to vegetative growth at this site. Its use is not known to adversely impact vegetation. See Response to Comment 20-23 below.

Comment 20-23:

Response: The commenter should refer to the appropriate sections of the Draft EIR/EIS Volume 1, Section 3.2, Geology, 3.3, Hydrology and Water Resources, 3.4, Vegetation, 3.5, Wildlife.

Water relations and rooting depths of desert shrubs are described by Rundel and Gibson (1996, Ch. 3). A few desert shrubs, particularly mesquite (*Prosopis* spp.), may root to shallow water tables. Mesquite occurs in a thicket near the proposed Quarry Well No. 3 site but otherwise is uncommon in the Project area. Hydrology analysis indicates the water table at that site would show negligible drawdown from the proposed project. See Volume 1, Section 3.3 Hydrology and Water Quality, page 3.3-94 Quarry Water Usage in the Draft EIR/EIS. Most species including creosote bush (*Larrea tridentata*, an evergreen with relatively deep green leaves and the most conspicuous shrub around the USG Plant and Quarry) do root into aquifers but employ various other physiological means to minimize water loss during dry seasons. Deep sandy soils such as those on desert bajadas and washes percolate surface water quickly but retain soil moisture at rooting depths.

Comment 20-24:

Response: In 3.3.4 (pages 3.3-94) the hydrology is discussed in detail with the finding that the pumping would be less than significant (page 3.3-101).

Impact to desert pupfish are discussed in Volume I, Section 3.5, Wildlife Draft EIR/EIS and Appendix C-5, Volume II, Draft EIR/EIS. Also see General Response 4.3.2. No adverse impacts are expected

Comment 20-25:

Response: A considerable portion of USG's mineral reserves exist beneath alluvial deposits in the unnamed wash. Based upon USG's previous experiences of quarrying gypsum beneath various types of overburden in different parts of the U.S., Canada, and Mexico the gypsum underlying the alluvium can be safely and economically recovered using current technology. Gypsum exposed in outcrops extends westward below the alluvial deposits. The practical stripping limit for the removal of overburden to recover the gypsum is 100 feet.

The development of the gypsum deposits beneath the wash will be done concurrently with outcrop gypsum to balance the increased quarrying cost. A phased approach to quarrying beneath the wash will be carried out. The

alluvial overburden (sand, gravel, and boulders) will be removed from the initial quarry cut in the wash and used to begin construction of a permanent berm for storm water control. As one phase in the quarrying of the alluvial wash is completed, overburden from an adjacent quarry cut will be pushed into the previous cut. Ultimately, the final ground level of quarried and reclaimed portions of the wash will result in a linear depression. Up to 150 feet of gypsum will be quarried beneath the wash. But, the resulting surface depression will be less, due to the bulking of the sand and gravel overburden that will be returned to the pit.

The depression will be isolated from the main portion of the alluvial wash by an engineered flood-control berm. Rainfall within the confines of the surface depression will infiltrate into the uncompacted sand and gravel fill. Intermittent flow in the alluvial wash will be directed away from the final surface depression by the flood-control berm and other storm water management measures.

Comment 20-26:

Response: The commenter should refer to the Reclamation Plan dated March 2003 and revised June 2003 and referenced in the Draft EIR/EIS. See also Response to Comment 20-25. The plan includes a description of berming the western quarry edge to prevent surface water diversion and facilitate revegetation. It also presents a plan for revegetation and slope stabilization upon reclamation.

Comment 20-27:

Response: Refer to Volume 1, Section 3.4, Vegetation in the Draft EIR/EIS.

The baseline survey of vegetation on claims proposed for future mining is described in the Draft EIR/EIS (Section 3.4 pp. 1-18) and Appendix C (Biological Technical Report for the Quarry site pp. 5-6). The Biological Technical Report reported on field surveys completed in 2002, which was a dry year. White and Leatherman BioServices revisited the site for follow-up botanical surveys of better rainfall years 2003 and 2005. Several plant species not recorded in 2002 were added to the project species list, including one special-status plant, Coulter's lyrepod (*Lyrocarpa coulteri* var. *palmeri*). This plant is on the California Native Plant Society's List 4 and was addressed in the Biological Technical Report. Its occurrence probability was considered "high" at that time, but adverse impacts would not meet CEQA levels of significance. See Biological Technical Report for the Quarry site (Appendix C of the Draft EIR/EIS, pp. 10, 15 and Appendix 1 of the report). The species list in Appendix C has been revised accordingly.

Field surveys were carried out during appropriate times of year and during several different years, representing a range of climatic conditions. All habitat

types on the site were visited and surveys were well-documented by the reports appended to the Draft EIR/EIS, follow-up memoranda, and voucher specimens deposited at the Rancho Santa Ana Botanic Garden Herbarium. Surveys conformed to recommendations by the California Native Plant Society, California Department of Fish and Game, and U.S. Fish and Wildlife Service.

Fugitive dust is generated by certain aspects of mining including blasting, excavation, ore crushing, sorting, transport, and vehicle traffic on unpaved roads. Significant dust deposition can be expected within several meters of haul roads and within perhaps 20-50 meters of quarries and processing areas. Dust can coat plant surfaces and can damage plants by blocking stomata, preventing gas exchange. Dust deposition on soil may also inhibit seed germination or reduce seedling establishment. These effects would reduce forage availability in dust-covered areas. See General Response 4.3.10. The Quarry air permit and APCD rules require appropriate dust suppression to reduce any adverse impacts to plants.

Comment 20-28:

Response: Based on surveys and collar tracking, the area is not very attractive to Peninsular bighorn sheep. Refer to Volume 1, Section 3.4, Vegetation in the Draft EIR/EIS. Also see General Response 4.3.1.

Comment 20-29:

Response: Refer to Volume 1, Section 3.4, Vegetation in the Draft EIR/EIS. The Quarry area is not particularly attractive to Peninsular bighorn sheep.

Dunes composed of gypsum support endemic plant species in some areas, especially the Chihuahuan Desert farther east (MacMahon 2000). But there are few if any Gypsum soil endemics in California. Gypsum outcrops on the USG claims have extremely low vegetation cover and diversity. What little vegetation is present is dominated by pygmy cedar (*Peucephyllum schottii*). Pygmy cedar is widespread and relatively common throughout the low desert. Based on field surveys for this project, no gypsum-endemic plants are known from the USG project sites. Orcutt's woody aster (*Xylorhiza orcuttii*) is the only special-status plant reported from the region typically occurring on gypsum soils (California Native Plant Society 2006). Contract biologists found no Orcutt's woody aster on gypsum outcrops or alluvial soils downslope during field surveys (see Response to Comment 20-27, above). Numerous Orcutt's woody aster specimens have been collected from the region (Consortium of California Herbaria 2006) and suitable habitat occurs throughout the proposed quarry expansion areas. The Biology Technical Report for the proposed quarry project concluded the probability of Orcutt's woody aster occurring on the site is high. Orcutt's woody aster is not listed,

proposed for listing, or a candidate for listing under state or federal Endangered Species Acts. See General Response 4.3.1.

Comment 20-30:

Response: Refer to Volume I, Section 3.5, Wildlife of the Draft EIR/EIS and General Response Peninsular bighorn sheep 4.3.1.

Comment 20-31:

Response: See General Response 4.3.1.

Comment 20-32:

Response: See General Response 4.3.1.

Comment 20-33:

Response: The patent application is with the Department of Interior (DOI). A protest to the application has been filed and DOI is expected to render a decision on the protest at some point in the future.

Comment 20-34:

Response: The Tunob unpatented placer mining claim was located and quarried in the early 1990s. A Plan of Operations was approved by the BLM for quarrying gypsum. Upon completion of quarrying the Tunob claim was reclaimed and is currently used for monitoring the success of revegetation.

Comment 20-35:

Response: Most of the properties owned by USG in the Fish Creek Quarry area were acquired when the assets of the Pacific Portland Cement Company were purchased in 1945. The properties were originally established by the Imperial Gypsum and Oil Company in the late 1910s to early 1920s and were subsequently purchased by the Pacific Portland Cement Company in 1922. These properties were originally acquired by the Imperial Gypsum and Oil Company from the General Land Office, the predecessor of the Bureau of Land Management.

USG has been granted a patent for mining claims after the 10/21/1976 date of enactment of FLPMA. Eight placer claims, covering an area of 152.51 acres were patented by the Department of the Interior on January 9, 1990 (Patent 04-90-0011). The placer claims in the Patent 04-90-0011 are located at the southernmost end of USG's mineral holdings and have not yet been developed.

An unpatented placer claim, Tunob, was authorized by the BLM under a Plan of Operations for quarrying gypsum after the passage of FLPMA. See Response to Comment 20-34.

There is no quarrying or milling activity on unpatented placer or millsite claims that was initiated prior to the passage of FLPMA on 10/21/1976.

The Shoveler Annex property, consisting of 142 acres of patented placer mining and millsite claims, was purchased by USG from California Portland Cement in 1990. California Portland Cement prepared a Reclamation Plan (No. 13-82) which was submitted to the Imperial County Planning Commission and approved on November 10, 1982. Subsequent to the purchase of the Shoveler Annex property, USG posted a new reclamation bond (No. 5677506).

Comment 20-36:

Response: See Response to Comment 20-29 and General Response 4.3.1. The Quarry is no longer within critical habitat for Peninsular bighorn sheep.

Fugitive dust would likely degrade forage availability within several meters of haul roads and within perhaps 20-50 meters of Quarries and processing areas (see Response to Comment 20-27 above). Also see General Response 4.3.10. Mining in the wash would remove vegetation and increase noise and other disturbances during active mining in any one area.

There is no evidence that the wash is prime breeding, lambing or forage area for Peninsular bighorn sheep. Siting of sheep and physical evidence is limited. Forage is also limited. Peninsular bighorn sheep appear to prefer the remoteness and safety of the surrounding mountains.

Comment 20-37:

Response: See Section 3.5.3, Wildlife.

Mitigation measures are described in Section 3.5 of the Draft EIR/EIS (pp. 3.5-41 and following). The Revegetation Plan (Appendix C-3 of the Draft EIR/EIS) is dated June 2002, and the commenter may not have seen it before preparing the letter. Imperial County and BLM will likely add further conditions per recommendations of the California Department of Conservation, Office of Mine Reclamation, and an amended Revegetation Plan will be prepared and submitted.

Comment 20-38:

Response: See Comment Response 20-6 and General Response 4.3.3.

Comment 20-39:

Response: See Comment Response 20-4 and General Response 4.3.2.

Comment 20-40:

Response: See Comment Response 20-26.

Wildlife and vegetation around the existing quarries are similar to the proposed Quarry expansion areas described in sections 3.4 and 3.5 of the Draft EIR/EIS. Disturbance effects on wildlife are described in the Response to Comment 19-9 above. Mitigation measures are described in Section 3.5 of the Draft EIR/EIS (pp. 3.5-41 and following).

Comment 20-41:

Response: See Volume I, Section 3.12, Acoustics/Noise of the Draft EIR/EIS.

Disturbance effects on wildlife are described in the Response to Comment 19-9, above. Fugitive dust would likely degrade forage availability within several meters of haul roads and within perhaps 20-50 meters of quarries and processing areas (see Response to Comment 20-27 above). Also see General Response 4.3.10.

Comment 20-42:

Response: See Comment Response 20-40. Generalized noise and other disturbance effects on wildlife are described in the Response to Comment 19-9, above. Varying responses to noise disturbances according to time of day are unknown, if any. Noise at the Quarry has been occurring for decades. The noise difference between baseline and expansion are limited, if any. Frequency of noise could increase slightly. See Volume 1, Section 3.12 Acoustics/Noise, page 3.12-1 of the Draft EIR/EIS. Noise at the Quarry should not vary dramatically from the existing baseline. Duration will increase with mine life.

Comment 20-43:

Response: See Comment Response 20-40.

Comment 20-44:

Response: See Volume I, Section 3.6, Air Quality and Section 3.10, Hazardous Materials of the Draft EIR/EIS.

Fugitive dust would likely degrade forage availability within several meters of haul roads and within perhaps 20-50 meters of quarries and processing areas (see Response to Comment 20-27 above). See also General Response 4.3.10.

Comment 20-45:

Response: See Volume I, Section 3.6, Air Quality and Section 3.10, Hazardous Materials of the Draft EIR/EIS. See Response to Comment 20-44. There is no asbestos in the Gypsum.

Comment 20-46:

Response: See Responses to Comments 20-8 and 25-8.

Formulation of the wallboard is proprietary and cannot be disclosed by any public agency. See Public Resources Code § 21160. See also CEQA Guidelines, § 15204 ("When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.").

Comment 20-47:

Response: See Response to Comment 20-46

Comment 20-48:

Response: In 2006 over 1 billion square feet of wallboard was produced at the Plaster City facility. This relates to approximately 21 million pieces of wallboard produced in 2006.

Comment 20-49:

Response: In 2006, the percentage of wallboard that was discarded as waste was 4.4 percent of the total production. There are slight variations in the amount of waste discarded due to seasonal differences, with more effect coming from high temperatures rather than an increase in ambient humidity.

Comment 20-50:

Response: In 2006, there were over 92,000 tons of stucco recycled. This was greater than 10 percent of the total stucco used for the year.

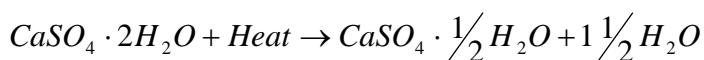
See Draft EIR/EIS pages 2.0-32 to 2.0-35 concerning off-specification wallboard recycling. Also the Invert Material Storage Area (IMSA) has been

substantially reduced in size. All off-specification wallboard is now recycled and none is added to the IMSA. See Response to Comment 20-52.

Comment 20-51:

Response: Maintaining low concentrations of sodium and chloride ions are a key to the quality of gypsum wallboard. The total concentration of sodium and chloride is derived from both the gypsum rock and the water used for production. The current levels of sodium and chloride in the process water are low enough to meet threshold requirements.

The chemistry of producing wallboard is a series of simple reactions. Gypsum rock, calcium sulfate dihydrate, is quarried, crushed, and transported to the mill. At the mill the rock is calcined, meaning through the process of applying heat to the gypsum rock one and a half molecules of water are driven off, resulting in calcium sulfate hemihydrate. The calcium sulfate hemihydrate, otherwise known as stucco, is transported to the board line. At the board line the stucco is mixed with water and additives, reforming calcium sulfate dihydrate.



Comment 20-52:

Response: The Plant strives to minimize the generation of off-specification wallboard. Daily generated off-specification wallboard is reclaimed into the manufacturing process as well as material generated in previous years (see Draft EIR/EIS, Volume I. Section 2.5.2.3 Management of Off-Specification Wallboard). Production activities at competitive wallboard producers are proprietary and unavailable.

Comment 20-53:

Response: Water is metered at the well sites. Virtually all of the water reaching the Plant is used for either production of wallboard or sanitary purposes. The only water disposed of at the Plant is sanitary waste water. Other water such as cooling water is reused and recycled into wallboard production. The loss of water in transmission is minimal. There are occasional breaks in the pipeline but the water loss is a minor percent as repairs are quickly made. Leakage from the pipeline is minimal as experience indicates that constant leakage will often appear as plant growth on the pipeline alignment.

Comment 20-54:

Response: See General Response 4.3.4. The use of IID water is discussed in 2.6.3 (partial use) and 2.6.4 (full use). The full use of IID water would require the need for additional treatment by reverse osmosis (RO) to reduce the salinity levels at times when the Colorado River water exceeds that for producing wallboard. This in turn would require evaporation ponds for brine disposal resulting for the RO operation. In addition the production of brine requires a greater supply of water. It would also be necessary to provide potable treatment for the potable water needs of the Plant. Under the partial use of IID water alternative, potable water would be obtained from the well water to blend down the Colorado River water. It is also noted that the use of IID water requires a new 5.5 mile pipeline and pumps to raise the water level about 145 feet in elevation.

Comment 20-55:

Response: Comment noted. See Response to Comment 2-54.

Comment 20-56:

Response Information in the comment is noted and has been shared with USG. “No-dig technology” is used in some situations to seal existing pipelines from the inside and could possibly be applicable to repairs on existing USG water lines. It cannot be used to install new pipelines. Pipelines beneath the Colorado River and other features are installed by horizontal drilling, using technology comparable to oil drill rigs. Horizontal drilling reduces surface disturbance but may cause other environmental impacts, e.g., from bentonite sumps or potential spills.

There are also tunnel and trenchless methods in use under specific conditions. They are used only in special cases such as crossing under railroads or Interstate highways where disruption is not acceptable. The methods are very expensive and not normal practice.

Comment 20-57:

Response: Comment noted. See General Response 4.3.3. See Response to Comment 2-56.

Comment 20-58:

Response: A cogeneration plant has been discussed and remains a possibility for the Plant (see Draft EIR/EIS Figures 2.0-7 and 3.5-4). Cogeneration would be used to generate electricity for the Plant and the exhaust heat would be used in the process to dry wallboard. There would be no increase in water usage from

the installation of a cogeneration system at the Plant. A cogeneration plant is not included in the proposed Project.

Comment 20-59:

Response: See Response to Comment 20-58, above. The main purpose of a cogeneration facility is not to reduce salinity of Colorado River water.

Comment 20-60:

Response: The commenter should refer to General Response 4.3.10. Also see Volume I, Section 3.6, Air Quality of the Draft EIR/EIS. The Plant is currently in compliance with air quality permit requirements and is subject to inspection by the Imperial County Air Pollution Control District (ICAPCD) and other regulatory agencies. Part of the project included construction and use of enclosed gypsum storage areas to reduce dust.

Comment 20-61:

Response: Comment noted.

Comment 20-62:

Response: Comment noted. Mines that were closed or reclaimed prior to SMARA are not subject to reclamation. Portions of the Fish Creek Quarry have been closed and reclaimed (151.8 acres, Phase 1B). See page 27, Mine Reclamation Plan revised June 2003.

Comment 20-63:

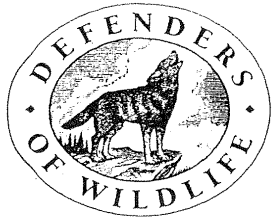
Response: No response is necessary because the comment contains only legal contentions and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a). See also Response to Comment 19-1.

Comment 20-64:

Response: Comment noted. No response required.

Comment 20-65:

Response: Comment noted. No response required.



Letter 21

July 10, 2002

Greg Thomsen
Field Manager
Bureau of Land Management
El Centro Field Office
1661 South 4th Street
El Centro, CA 92243

RECEIVED

MAY 26 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

New Mexico Field Office
824 Gold Avenue, SW
Albuquerque, NM 87107
Telephone 505-248-0118
Fax 505-248-0187

Via Fax (760-337-4490) and Mail

Dear Mr. Thomsen:

These comments are submitted on behalf of Defenders of Wildlife (Defenders). Defenders is a national non-profit, public-interest organization with over 400,000 members and supporters, over 100,000 of whom reside in California. Defenders works to preserve the integrity and diversity of natural ecosystems, prevent the decline of native species, and restore threatened habitats and wildlife populations.

Thank you for the opportunity to provide comments on the content and scope of the Draft Environmental Impact Statement (Draft EIS or DEIS) on the Proposed Expansion/Modernization of an Existing Wallboard Manufacturing Facility and Associated Quarry Operation. Defenders has a long-standing interest in the natural environment of the Imperial and Mexicali Valleys. In particular, Defenders has long sought protection for the desert tortoise, flat-tailed horned lizard, desert pupfish and many other native plants, animals and their habitats.

Defenders is aware that Imperial County has initiated a California Environmental Quality Act (CEQA) process related to this project in early 2002. The Draft EIS must clarify whether this is a joint NEPA/CEQA process; this information is not stated in the notice. In addition, the DEIS must define both the federal action and the state action, as well as the agencies responsible, and explain the reasons why and who was responsible for the portion of project already completed.

21-1

The National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.*, "is our basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). Its purpose is to "promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man," 42 U.S.C. § 4321, and to "help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore and enhance the environment." 40 C.F.R. § 1500.1(c).

21-2

Section 102(2) of NEPA contains action-forcing provisions, aimed at

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fulfilling NEPA’s intent, that requires the Bureau of Land Management (BLM) to prepare an environmental impact statement for “major Federal actions significantly affecting the quality of the human environment” that includes “the environmental impact of the proposed action,” “any adverse environmental effects which cannot be avoided,” and “alternatives to the proposed action.” Id. § 4332(2)(C).

Defenders has serious concerns about the legitimacy of this NEPA process because a significant component of the action – the expansion of the wallboard factory – is nearly complete. Project completion leads us, and the reader, to believe that the BLM has already determined its course of action, rendering the EIS’s consideration of alternatives, impacts, and mitigation superfluous and also that the BLM is unlikely to heed the public’s comments. By putting the cart before the horse, this process has violated NEPA’s requirement that the BLM take no action having an adverse environmental impact, 40 C.F.R. § 1506.1(a), or limiting the range of alternatives before the issuance of a Record of Decision. Id. § 1506.1(b).

Alternatives

Development of alternatives is the heart of the EIS. 40 C.F.R. § 1502.14. CEQ regulations call on the INS to “[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated,” “[d]evote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits,” “[i]nclude the alternative of no action,” and “[i]nclude appropriate mitigation measures not already included in the proposed action or alternatives.” Id. § 1502.14 (emphasis added).

The fact that portions of the “proposed” project have already been implemented, in fact, that the factory expansion is nearly complete, has seriously impaired the alternatives discussion. Given that NEPA requires that “[a]gencies shall not commit resources prejudicing selection of alternatives before making a final decision,” 40 C.F.R. § 1502.2(f), and that an EIS “shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made,” id. § 1502.2(g), and that until a record of decision is issued, “no action concerning the proposal shall be taken which would . . . limit the choice of reasonable alternatives,” id. § 1506.1(a)(2).

This Draft EIS must take the additional step of describing the proposed action in terms of those actions proposed and those actions completed. The description of the proposed action must include the baseline (‘baseline’ defined as those operations as they existed before the NEPA and CEQA-violations occurred) quarry and factory locations and operations, the location of all mining patents and claims, and the location and operations of the railroad and the water pipeline. BLM must also describe what actions were taken to arrive at the existing setting, particularly those implemented without NEPA or CEQA compliance, and explain how these actions have restricted the available range of alternatives.

As for the proposed expansion of the quarry operations and the quarry itself, alternatives

(as well as mitigation) should discuss restrictions on when mining operations are allowed and where the quarry will be allowed to expand. The quarry should keep its distance from the Anza Borrego State Park and critical habitat for endangered species, particularly the desert pupfish and Peninsular bighorn sheep.

21-5
Con't.

Existing Environment and Environmental Consequences

The notice states that the baseline “shall be the physical conditions that existed prior to project implementation.” Defenders agrees that the DEIS use this definition for the baseline. However, since NEPA clearly requires that environmental impacts be considered before any decision is made and the project initiated, the DEIS’s characterization of the baseline will almost certainly be flawed. “After all, once a project begins, the ‘pre-project environment’ becomes a thing of the past. Evaluating the project’s effect on pre-project resources is simply impossible.” LaFlamme v. FERC, 852 F.2d 389, 400 (9th Cir. 1988) (vacating FERC license given failure to comply with NEPA).

21-6

Defenders insists that the DEIS describe precisely how the baseline was determined, including the point in time this baseline represents and the sources relied on. Furthermore, Defenders believes that this “baseline” be maintained to the extent possible until a record of decision is issued.

The environmental consequences section of the EIS “forms the scientific and analytic basis” for the comparison of alternatives. Id. § 1502.16. This section discusses the direct and indirect effects of the alternatives, the significance of the environmental effects, and the means to mitigate adverse impacts. Id. Direct effects are caused by the action and occur at the same time and place, id. § 1508.8, and indirect effects are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” Id.

21-7

In addition to the adverse effects, BLM must discuss mitigation measures; it is implicit in NEPA’s command and the CEQ’s regulations. The omission of reasonably complete discussion of mitigation measures would undermine NEPA’s action forcing functions. Without such, interested parties cannot properly evaluate the severity of adverse impacts. Roberston v. Methow Valley Citizens Council, 490 U.S. 332 (1989).

Mitigation measures must cover the range of impacts of the proposal and must include such things as design alternatives, possible land use controls and other possible efforts. “Once the proposal itself is considered as a whole to have significant effects, all of its specific effects on the environment (whether or not “significant”) must be considered, and mitigation measures must be developed where it is feasible to do so.” Forty Most Asked Questions Concerning CEQ’s NEPA Regulations, 46 Fed. Reg. 18026 (March 23, 1981). See also 40 C.F.R. §§ 1502.14(f), 1502.16(h), 1508.14. BLM must propose alternatives that decrease construction impacts, esthetic intrusion, habitat destruction, adverse impact on endangered species and human

21-8

presence/interference.

21-8
Con't.

When developing alternatives and mitigation measures, BLM should keep the following priorities in mind: a) avoid the impact by not taking the action; b) minimize the impact by limiting the action; c) rectify the impact by rehabilitation; d) reduce the impact by maintenance; and e) compensate for the impact by replacement. 40 C.F.R. § 1508.20. Avoidance is the preferable course of action because so many of the proposed activities cause permanent damage to wildlife: quarry and factory expansion, increased water use, roads, railways, etc. In the alternatives, BLM must thoroughly explore the use of existing road and other sources of water in favor of expansion of the quarry and construction of new roads.

Sensitive Species

The notice acknowledges that the proposed action may take place in flat-tailed horned lizard habitat, including management areas set aside specifically for the flat-tailed horned lizard (West Mesa and Yuha Desert Management Areas). Further, the quarry is located entirely within critical habitat for the Peninsular bighorn sheep. Additional sensitive species not identified in the notice, but likely to occur in the area must also be included in the DEIS: desert pupfish and its designated critical habitat. The desert pupfish occurs in areas down-gradient of Fish Creek Wash, into which the quarry proposes to expand. Species surveys, which we suggest BLM perform as part of determining the baseline, will report additional federal or state-designated sensitive species.

21-9

The proposed action and its alternatives must examine and avoid habitat loss to these species, since it has been identified as the biggest threat to these species' survival. Examples of actions that must be evaluated for adverse effects and mitigation alternatives include quarry expansion, relocating the rail line, replacing the pipeline, quarry operations (including blasting and water use) and factory operations (including water use, railroad use and expansion). As explained above, BLM must consider mitigation measures during the NEPA process, and the avoidance of impacts is preferred, since "[t]he degree to which the action may adversely affect an endangered or threatened species or its [critical] habitat" factors into the determination of significance. 40 C.F.R. § 1508.27(b)(9).

Lastly, under the Endangered Species Act (ESA), 16 U.S.C. § 1531 et seq., the BLM is required to determine whether the proposed activity "may affect" federally-listed or proposed species. If so determined, BLM must consult with the Fish and Wildlife Service (FWS) in order to ensure that their actions do not jeopardize listed species or adversely modify critical habitat. A failure to do so is a violation of the ESA. We urge the BLM to initiate consultation with FWS early in the scoping process in order to preserve alternatives that are less adverse to listed species.

21-10

Groundwater Resources

Industrial operations, particularly those in the desert, should not use scarce potable water. The DEIS must detail all proposed uses of water, the sources and quantities of water, and explore

21-11

alternatives for obtaining water and using water more efficiently. Uses of water might include dust suppression, municipal and industrial uses, use by native vegetation, etc. If increased water use is going to occur (or even if it already has), an additional alternative should address accessing additional water from sources other than the Ocotillo sole source aquifer. The Imperial Irrigation District is one such source.

21-11
Con't.

In addition, the DEIS must discuss the safe yield and recharge of the Ocotillo aquifer and the impacts of industrial pumping on this sole source aquifer. Also, BLM must coordinate with the Regional EPA office so that EPA may review the impacts of the project on the aquifer. Because the aquifer serves as the sole source of water for several communities, it must be protected and industrial use must be restricted. There must also be a monitoring plan for impacts to municipal users, and a plan for mitigating and avoiding those impacts.

21-12

Biological Resources (lands)

First and foremost, the DEIS must contain one map that illustrates the proposed project (quarry, factory, rail lines, pipeline, groundwater pumping) in relation to federal and state special management areas. Currently, it requires the use of several maps to learn that the quarry and/or factory are in the vicinity of the Anza Borrego State Park, San Sebastian Marsh/San Felipe Creek Area of Critical Environmental Concern (ACEC), Yuha Desert ACEC, West Mesa ACEC, Fish Creek Wilderness Area, Carrizo Badlands State Park Wilderness Area, and the Vallecito Mountains State Park Wilderness Area. The DEIS must investigate special management considerations for each of these areas, coordinate with the appropriate land managers, and avoid all conflicts the proposed project would have.

21-13

Air Quality

The DEIS must (quantitatively/qualitatively) discuss the air quality impacts from fugitive dust emissions of the quarry, and emissions from the factory. A critical factor in ecosystem health human health, this inquiry is particularly relevant in Imperial County which is in non-attainment for both federal and state ozone and PM₁₀ air quality standards. Cumulative impacts are also acute and the DEIS must consider the impacts of numerous actions also occurring in Imperial County – the Imperial Irrigation District water conservation and transfer program; the lining of the All-American Canal; and North Baja Powerline are a few examples.

21-14

Socioeconomics

The DEIS must examine federal, state, and local subsidies to U.S. Gypsum for its operation and expansion, so that local communities can accurately measure the costs and benefits (environmental and economic) of the proposed action.

21-15

In conclusion, thank you for this opportunity to comment and also for allowing an extension of the comment period. If you have any questions regarding these comments, do not

hesitate to contact me.

Sincerely,


Kara Gillon
Wildlife Counsel

Letter 21
Defenders of Wildlife, July 10, 2002

This comment letter is dated July 2002 and is providing scoping suggestions to the proposed EIR/EIS. It was not based on review of the Draft EIR/EIS and its comments are therefore not relevant to specifics of the document. It predates the Draft EIR/EIS publication by three years and nine months. It was resubmitted to the County in May 2006 for consideration as a comment to the Draft EIR/EIS.

Those comments not relevant to the current comment procedure are responded to with “comment noted.” When the comment can be referenced to a specific section of the EIR/EIS the citation is provided. In some cases the issues are expressed in formal comment letters. These responses are also referenced.

Comment 21-1:

Response: The Draft EIR/EIS is a joint CEQA/NEPA document. The commenter should refer to Volume I, Sections 1, Introduction and Section 2, Proposed Action and Alternatives of the Draft EIR/EIS.

Comment 21-2:

Response: Comment noted. Please refer to Volume I, Sections 1, Introduction and Section 2, Proposed Action and Alternatives of the Draft EIR/EIS. The Project was initiated and essentially completed prior to the Court of Appeals decision that an EIR was needed. USG accomplished the Plant Expansion/Modernization after the Superior Court denied Sierra Club’s challenge. Much effort has been applied to assessing the potential impacts of the Project as proposed.

Comment 21-3:

Response: Comment noted. The commenter should refer to Volume I, Sections 1, Introduction and Section 2, Proposed Action and Alternatives of the Draft EIR/EIS.

Comment 21-4:

Response: The commenter should refer to Volume I, Sections 1, Introduction and Section 2, Proposed Action and Alternatives of the Draft EIR/EIS. The Draft EIR/EIS is clear about which components of the Project have been completed.

Comment 21-5:

Response: Comment noted. See Section 2, Proposed Action and Alternatives and Section 3.5, Wildlife of the Draft EIR/EIS.

Comment 21-6:

Response: Comment noted. See Response to Comment 21-2, the baselines used are those conditions that existed prior to project implementation.

Comment 21-7:

Response: Comment noted. The Draft EIR/EIS include direct and indirect effects of the project and alternatives. It also discusses mitigation measures.

Comment 21-8:

Response: Comment noted.

Comment 21-9:

Response: Comment noted. See Section 3.5 and Appendices C-1 and C-2 of the Draft EIR/EIS. Also see General Responses 4.3.1, 4.3.2, and 4.3.3.

Comment 21-10:

Response: See General Responses 4.3.1, 4.3.2, and 4.3.3. BLM is responsible for consultation with the U.S. Fish and Wildlife Service.

Comment 21-11:

Response: Comment noted. See General Responses 4.3.4 for water supply alternatives and 4.3.5 for discussion of priorities among different water uses. Commenter should refer to Volume I, Section 3.3, Hydrology and Water Quality of the Draft EIR/EIS. Alternatives to Ocotillo-Coyote Wells Groundwater Basin are presented in the Draft EIR/EIS.

Comment 21-12:

Response: Comment noted. For discussion of impacts, mitigation and monitoring, commenter should refer to Volume I, Section 3.3, Hydrology and Water Quality of the Draft EIR/EIS. For discussion of recharge, see General Response 4.3.7. See General Response 4.3.5 for discussion of priorities among different water uses. The sole source aquifer designation requires U.S. EPA review if the Project is to receive federal funds. USG's project does not receive federal funds.

Comment 21-13:

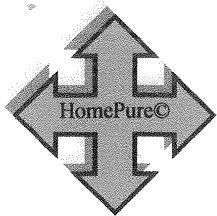
Response: See Figure 2.0-1 location of Project components, Volume I, Section 2, Proposed Action and Alternatives, page 2.0-3. Since the Project covers a large area, several maps help provide needed details.

Comment 21-14:

Response: See Volume I, Section 3.6 Air Quality of the Draft EIR/EIS.

Comment 21-15:

Response: Comment noted. USG's expansion does not involve subsidies from any government level that would be considered as an approval and need not be discussed in the Draft EIR/EIS.



Letter 22



July 11, 2006.

Board of Supervisors - County of Imperial
940 West Main Street, Suite 211
El Centro, CA 92243

Re: Plaster City Plant Upgrade/Expansion and the effects upon the Ocotillo-Coyote Wells Sole Source Aquifer.

Gentlemen,

My name is Denis O'Shea. I reside at 57 Palo Verde Avenue in Ocotillo Ca 92259.

Recently a posting, attached, appeared on the public notice board outside the post office building in Ocotillo. Some of us have found the contents slightly confusing since, with some exception, the posting and related documents were unsigned. 22-1

The contents of the documents relate to the planned upgrade and expansion of the US Gypsum plant in Plaster City. The author has concisely stated various facts relating to the state of the Ocotillo-Coyote Wells Sole Source Aquifer should US Gypsum be granted the additional 400 Acre Feet per year of water they request. Regardless of source whether US Gypsum extract all requested volumes from the Aquifer or from a blend of IID canal water and Aquifer water, the fact remains that the greater percentage of the requested water will come from a thirty to one blend ratio – thirty gallons of Aquifer water to each one gallon of canal water. Whatever the final decision the Aquifer is going to experience extreme draw-down if the proposed extraction is granted without careful study of the regional mass balance of available supplies to present and future demand.

There are two additional sources of draw-down pending but not identified in the unsigned report document. The Granite Rock gravel operation – north West of Ocotillo is reportedly seeking an additional 147 AcreFeet of supply per year and the largest unknown – the impact of the planned development of the Silicon Valley of Mexico on the south western side of Mount Signal in Mexicali. In twenty years it is planned to have 100,000 people living and working in that area. It is not out of the question that CNA (Comision Nacional Del Agua) will opt to exercise rights under the Treaty of Guadalupe to extract from the Ocotillo-Coyote Wells Aquifer to meet the needs of this emerging population. Consulting the included EPA Ocotillo-Coyote Wells Aquifer Map which defines the boundary of the resource you will notice that the southern boundary of the Aquifer is the frontier line between the US and Mexico. Nature is no respecter of man-made lines on paper and it is very clear that Mexican rights to “Our Water” are legal and enforceable. Perhaps the imminent lining of the All American canal to produce surplus volumes of Colorado River Water for sale to San Diego and Los Angeles will be the initiating event to turn attention south of the border to opportunities to restore their lost volumes. I do know that they are aware of the aquifer and do not doubt that they will execute all legal and available remedies to their imminent loss. 22-2

Taking these additional unconsidered draw-downs into consideration with the requested Plaster City Expansion it behooves the board to fully understand the impacts on our Federally Protected Sole Source Aquifer and to move to assure that within the Boards jurisdiction the needs and rights of all County residents – both business and commercial, are addressed and not lost in the rush to accommodate the requirements of those more politically active and astute.

Ocotillo is in danger of losing out, again, in this process. While we have a history of silence during past comment periods on major regional issues such as this that impact our Colonia the Board should understand that it is not unreasonable for us to expect the Board to weave consideration for the restoration of the County Fire - Emergency Response and County Sheriff presence in the Colonia of Ocotillo. It is also not unreasonable for such a re-establishment to be funded by a levy on high volume users of the Aquifer resource. Traffic and transient deaths due to lack of adequate emergency response in our area are noted with increasing frequency and the Seeley Station response time is questionable to meeting the need. 22-3

I would urge the Board to table the Plaster City Plant Upgrade and Expansion until a more comprehensive sub regional understanding of the water and service needs of all concerned is compiled and appreciated. Water is perhaps one of the last remaining of the original natural resources and who are we to complain about the actions of others if we ourselves commit similar carelessness. 22-4

Denis O'Shea

Denis O'Shea
January 21, 2008

Plaster City Plant Upgrade and Expansion

In 1996, the EPA designated the Ocotillo-Coyote Wells Aquifer as a *sole-source aquifer*—one that supplies at least 50% of the drinking water consumed in the area overlying the aquifer. These areas can have no alternative drinking water sources which could physically, legally, and economically supply all those who depend upon the aquifer for drinking water.

The Environmental Impact Report released April 2006 examines, among other issues, U.S. Gypsum's proposal to **more than double** the amount of water currently being pumped from the Ocotillo-Coyote Wells Aquifer to manufacture wallboard. This water is carried from three wells by a gravity-feed pipeline to the plant 8 miles to the east. They propose to replace the current 8-inch line with a 10-inch line, and increase water usage from the 1998 baseline rate of 347 acre-feet per year to 767 AF/yr—an increase of 420 AF/yr—for up to 80 years.

ALTERNATIVE PLANS

The EIR also examines several alternatives to this action:

Drill New Wells at Ocotillo

Two new wells would be drilled north and south of Ocotillo, each to produce 200 AF/yr. This plan was rejected because (1) the probability that either location would provide a good producing well is unknown, (2) the rights to use the land and easements for either well would have to be acquired from BLM or private landowners, and (3) this alternative does not appear to be achievable within a reasonable length of time.

Drill New Wells at Plant

The groundwater beneath the plant is highly saline and cannot be used to manufacture wallboard because the high salt content reduces the strength of the wallboard and causes the paper cover to delaminate from the core. Thus any wellwater pumped onsite would have to undergo considerable treatment. In addition, it would have to be blended with Ocotillo well water at the ratio of 30 parts of Ocotillo water to one part of plant water to become usable in manufacture. Finally, pumping tests determined the plant's aquifer would provide insufficient quantity to be usable in manufacture. This proposal was also rejected.

Use Canal Water Supplied by the IID

One proposal would continue to extract 347 AF/yr from Ocotillo, as now, with the excess water needed provided by IID. Because canal water quality varies over time, it would be blended with Ocotillo well water to achieve the quality necessary for wallboard manufacture without additional treatment. This proposal would require construction of a 5½-mile pipeline from Westside Main Canal, a pumping station near the canal, two 1-million-gallon settling basins, and blending facilities at the plant.

Another proposal would have IID supply *all* water required for manufacturing and drinking. In addition to the pipeline and pumping station mentioned above, this proposal would require two 9-million gallon settling basins, desalinization and wastewater treatment facilities, and evaporation ponds at the plant.

The time required for approvals, permits, and construction for either proposal would be about five years. The feasibility of either proposal is unknown due to current water transfer disputes with San Diego.

STATUS OF THE AQUIFER

Basin Recharge

The upper few feet of groundwater in the basin tends to be saline and have a high TDS (total dissolved solids) content. This indicates that there is no appreciable recharge of fresh water from rainfall across the valley floor. Thus, the only significant source of recharge is seasonal rainfall runoff from the surrounding mountains (0.5 in./yr). However, the long groundwater travel times across the basin (centuries to millennia) tend to even out short-term fluctuations in rainfall.

Normal Groundwater Decline

The static (non-pumping) water levels in the Ocotillo/Nomirage area have steadily declined over the last 30 years—a total of 5-6 feet, for an average of one foot every 5 years. The revised groundwater model used in this EIR study indicates that water levels over the next 80 years may decline by up to 10 feet under baseline (non-pumping) conditions. Thus, the baseline rate of decline is approximately one foot every 8 years. The declining water levels in the basin indicate that the amount of recharge is less than the amount of water being removed.

Pumping Rates

Current domestic water use in the Ocotillo/Nomirage area is approximately 120-125 AF/yr. Local commercial and industrial users (Val Rock, Farmers Land Leveling, 3 other quarries) use as much as 41-43 AF/yr. Average pumping rate by USG for the 5-year period from 1994 through 1998 was 347 AF/yr. In the 1970s and 1980s, two wells extracted approximately 137-222 AF/yr. for export to Mexico. Drawdowns of up to 60 feet occurred at or near the pumping wells, but water levels did recover after pumping was suspended.

Water Quality

Pumping of wells for several years at rates of 100-200 AF/yr can have a measurable impact on water quality in certain areas of the basin. This impact appears rapidly and persists for many years after pumping ceases. Decrease in water quality may be due to migration of higher TDS water laterally or vertically. Wells that exported water to Mexico in 1970s and 1980s showed significant increases in TDS.

MITIGATION FOR WELL OWNERS

Reduced Water Levels

The EIR study's model predicts total drawdown of the water table in the Ocotillo/Nomirage area, from pumping 767 AF/yr for 80 years, to be about 30 feet. This reduction in water levels could increase the cost of pumping and cause some wells to run dry.

Mitigation:

If water level in a well decreases at a rate faster than one foot every 8 years, and average levels in surrounding wells also decrease for more than two years in a row, USG will do one of the following:

- Rehabilitate the well and/or install a new pump to restore prior pumping rate
- Deepen existing well or drill new well, and reimburse owner for additional costs of pumping
- Replace the water lost due to reduced rate of pumping with water of like kind and quality, and reimburse owner for additional costs of pumping remaining water
- Provide a full replacement water supply of like kind and quality at the cost to the owner prior to increased pumping

Degraded Water Quality

Because of geologic complexities, the study's model could not predict changes in water quality due to drawdown of the water table. However, as groundwater declines, the saline water present at the water table may eventually reach the screened interval of some wells and appreciably affect the water quality of that well.

Mitigation:

- If TDS level exceeds 500 mg/L (non-potable), USG will supply an alternative supply of water for drinking or cooking (bottled water or hookup to replacement water source)
- If TDS level exceeds 1,000 mg/L (damage to plumbing, scale buildup, corrosion), USG will provide a hookup to replacement water source (i.e. "an existing municipal district or other appropriate drinking water supply system")

NO MITIGATION FOR AQUIFER

Reduced Water Levels

Increased pumping of USG wells will lower water levels over a broad area of the Ocotillo-Coyote Wells Aquifer. This lowering will be in addition to the existing decline of the water table. Periods of increased rainfall and decreased pumping historically have not resulted in a basin-wide recovery of water levels. Therefore, the additional decline in water levels caused by increased pumping by USG cannot readily be offset by decreases in pumping elsewhere in the basin, enhancing recharge, or importing water. This is a **significant and unavoidable impact** on the basin-wide groundwater and **cannot be mitigated**.

Degraded Water Quality

Increased pumping of USG wells could degrade water quality in the groundwater basin due to migration of higher-TDS water. If water quality in areas of the basin degrades to the point where the water is not suitable for its current use, there is insufficient recharge of non-saline water to restore the water quality. **It is not possible to mitigate the basin-wide degradation of water quality.**

Where is the common sense here?

Drain the pristine aquifer to wash wallboard and then make up for it by supplying the local yokels with trucked-in or bottled water to replace it? The logical alternative is for USG to pipe in canal water—but, gosh, all that expense to build a water treatment plant, not to mention the time it will take!

Do you smell politics at work? Do you feel like the little guy being trampled by the big bully? As early as 1979, Imperial County attempted to halt or limit the export of water from the basin to Mexico because of concerns regarding overdraft of the aquifer and degradation of water quality. Where is that concern *now*, considering that more than twice the water will be pumped?

If you are happy with this situation, or don't care, then do nothing. U.S. Gypsum will be pleased to supply you with all the bottled water you need should your well run dry or the water turn salty and undrinkable.

But if this plundering of our *sole-source* aquifer has you outraged, write your Congressman—seriously! And the Board of Supervisors. And the Planning Department. And...

Jurg Heuberger, Planning Director
Imperial County Planning Department
939 Main Street, Suite B-1
El Centro, CA 92243
482-4236
jurgheuberger@imperialcounty.net

Hillary Hecht
Environmental Protection Agency
Ground Water Office, WTR-9
75 Hawthorne Street
San Francisco, CA 94105
(415) 972-3530
hecht.hillary@epa.gov

Larry Grogan
County Board of Supervisors
940 Main St.
El Centro, CA 92243
482-4306

Rep. Bob Filner
1101 Airport Rd., Suite D
Imperial, CA 92251
355-8800

Imperial Valley Press
P.O. Box 791
El Centro, CA 92244

Ocotillo-Coyote Wells Sole Source Aquifer Designated Area

Notes and Explanation:

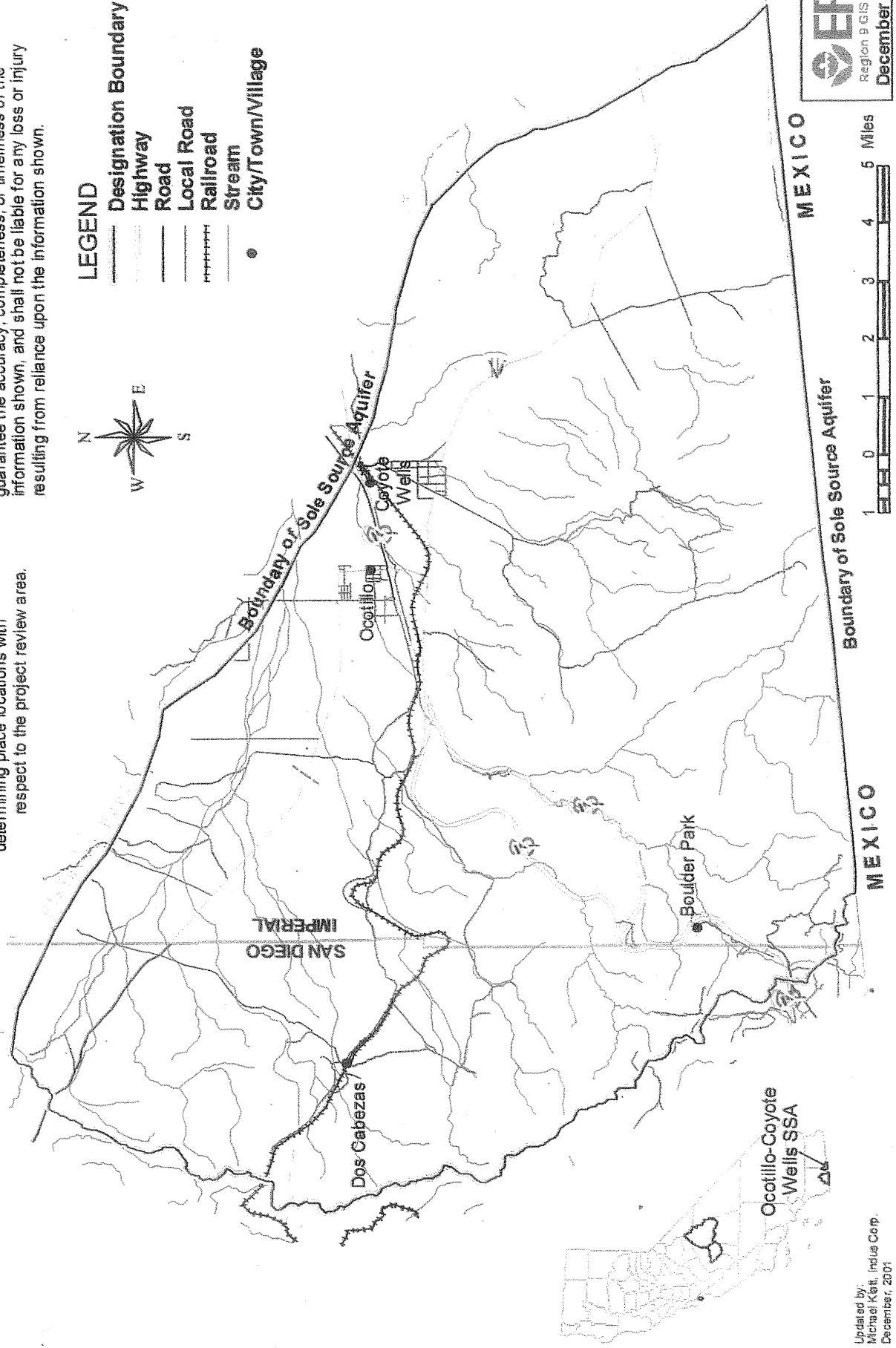
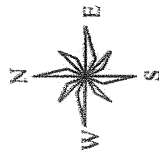
The Ocotillo-Coyote Wells Sole Source Aquifer was designated under the authority of Section 1424(e) of the Safe Drinking Water Act; Federal Register Citation- 61 FR 47752; Publication Date- 09/10/96. Please contact US EPA Region IX (Hillary Hecht, 415-972.3530) for assistance in determining place locations with respect to the project review area.

Map Status and Disclaimer:

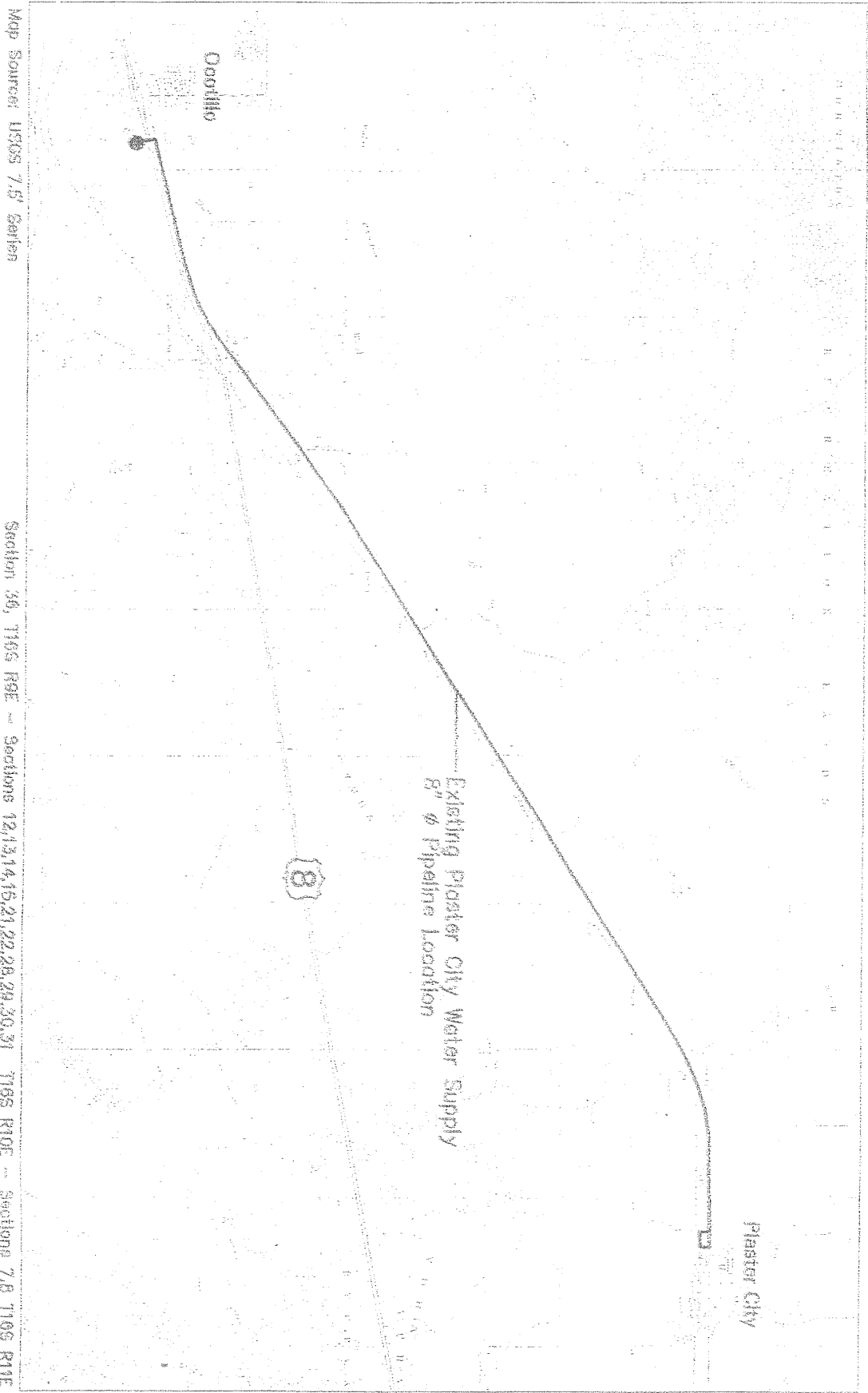
Please note that this working map is a computer representation compiled by the Environmental Protection Agency (EPA) from sources which have supplied data or information that may have not been verified by the EPA. This data is offered here as a general representation only, and is not to be used for commercial purposes without verification by an independent professional qualified to verify such data or information. The EPA does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any loss or injury resulting from reliance upon the information shown.

LEGEND

- Designation Boundary
- Highway
- Road
- Local Road
- Railroad
- Stream
- City/Town/Village



Updated by:
Michael Kerr, InLus Corp.
December, 2001



Map Source: USGS 7.5' Series

Section 36, 1165 R9E -- Sections 12,13,14,15,21,22,28,29,30,31 7165 R10E -- Sections 7,8 7165 R11E

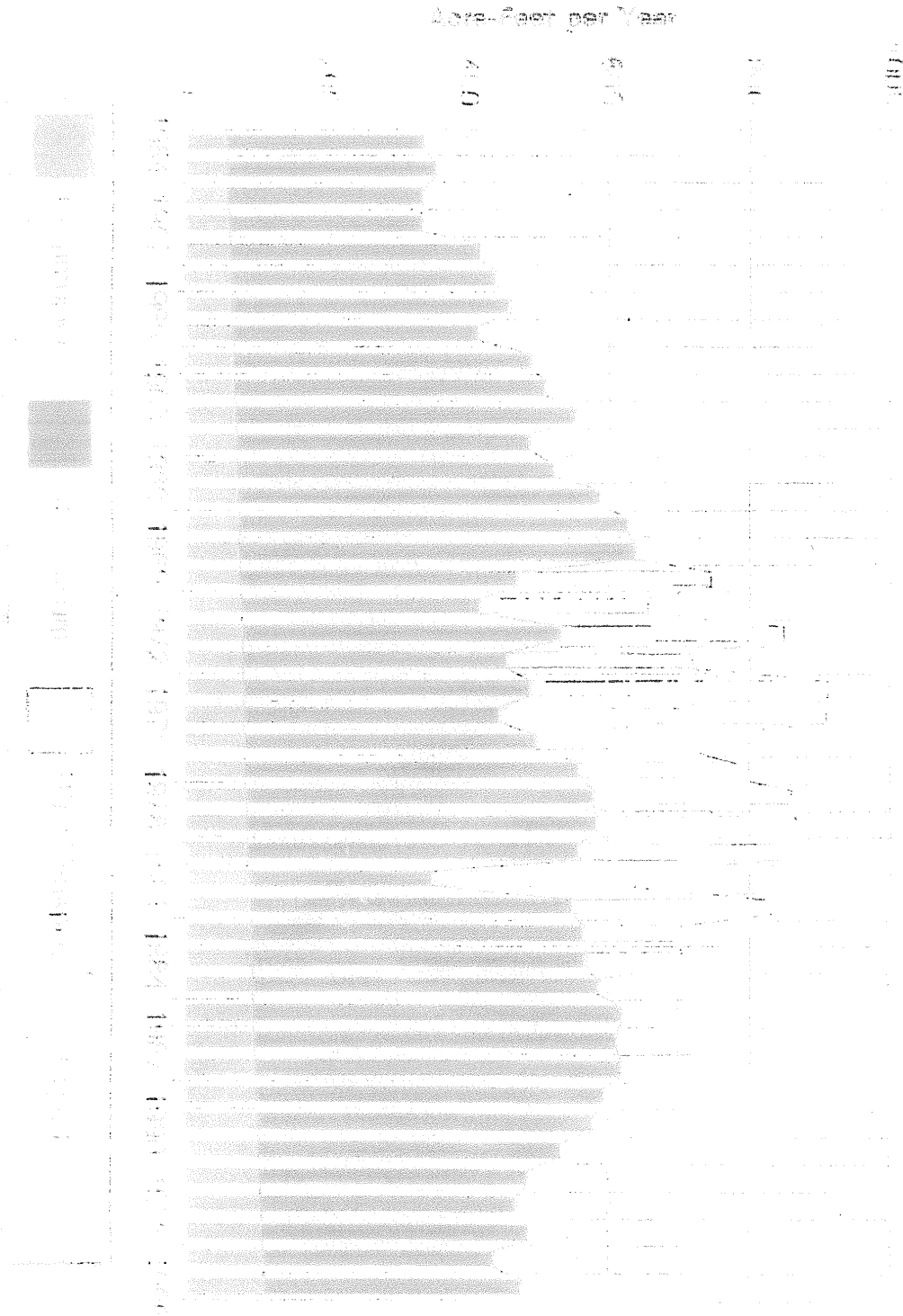
Figure 2.0-5

Water Supply Pipeline Alignment
 US GYPSUM EXPANSION/MODERNIZATION PROJECT
 IMPERIAL COUNTY, CALIFORNIA

RESOURCE DESIGN
 TECHNOLOGY, INC.

IMPACT OF U.S. GYPSUM PRODUCTION ON THE ENVIRONMENT
 IMPACT OF U.S. GYPSUM PRODUCTION ON THE ENVIRONMENT
 IMPACT OF U.S. GYPSUM PRODUCTION ON THE ENVIRONMENT

Figure 5.5-8



Letter 22
HomePure Water Systems, July 11, 2006

Comment 22-1:

Response: Neither the County or BLM published or posted this document. It appears to be from a citizen or citizen group. Its authenticity and accuracy is unknown.

Comment 22-2:

Response: Section 3.3 of the Draft EIR/EIS describes groundwater supply and demand and evaluates potential impacts on local aquifers of the proposed operations. Specifically, water levels in the Basin are expected to decline by up to 10 feet under baseline conditions (i.e., without the project) over the next 80 years, and if USG were to increase pumping to 767 acre-feet per year, then the decline is expected to increase by an additional 20 to 23 feet. The impact evaluation includes application of a numerical groundwater model that incorporates the regional mass balance of water supply and demand. See also General Response 4.3.7 for discussion of the water balance.

Note: the thirty to one blend quoted in the letter is incorrectly referenced. A thirty to one blend in the EIR/EIS was referring to using groundwater below the Plant, which is so saline that it would require a blend of thirty parts of Ocotillo groundwater to one part of groundwater at the plant to make it usable (see Draft EIR/EIS page 2.0-78).

The Draft EIR/EIS considers cumulative impacts of other projects. See Draft EIR/EIS, Volume I, Section 3.3. Each section of the Draft EIR/EIS incorporates cumulative impacts from projects within the affected area into the baseline as described in Section 3.1.2, Cumulative Projects, in Volume 1 of the Draft EIR/EIS. All known existing and proposed groundwater uses related to the Basin have been incorporated into the numerical groundwater model. Specifically, the County Planning Department and the BLM were contacted to identify other projects. Neither agency's records revealed any planned future projects with the potential for a cumulative effect.

The comment is noted regarding potential development in Mexico near Mexicali. Mexicali is located in the southern extension of the Imperial Valley Groundwater Basin and not in the Ocotillo-Coyote Wells Groundwater Basin. The Ocotillo-Coyote Wells Groundwater Basin does not extend south into Mexico. Based on the revised geologic interpretation (see General Response 4.3.6), there is a restriction in the alluvial aquifer near Yuha Estates that limits flow to the south. The drawdowns in the Ocotillo area from any significant increase in pumping along the Mexico border would likely be limited by this natural geologic restriction.

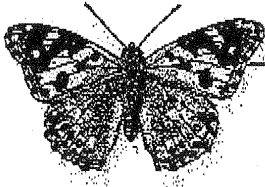
Comment 22-3:

Response: Comment noted.

Comment 22-4:

Response: As described in the Draft EIR/EIS, elements of the project have been built. Water issues are discussed in the Draft EIR/EIS in Volume I, Section 3.3, Hydrology and Water Quality. Also see the irreversible and irretrievable resource commitment discussion in Section 4.2. For understanding of historical and current water needs, see General Response 4.3.7 (Water Balance) and for evaluation of potential water needs see General Response 4.3.8.

Letter 23



Callie Mack

digital and traditional illustration

8529 Jackie Drive • San Diego, CA 92119 • Tel/fax (619) 461-7050
www.cmackillustration.com • email: callie@sdccu.net

Friday, July 14, 2006

Linda Self
BLM El Centro Field Office
1661 South 4th Street
El Centro, CA 92243

Dear Ms. Self:

I am opposed to the proposed expansion of the U.S. Gypsum (USG) mine and wallboard production facility. This expansion will result in unacceptable impacts to water resources, upon which local communities, and many native plants and wildlife, depend. The proposed project would destroy public lands and natural values that are part of the California Desert *Conservation Area* (CDCA).

The proposed project would allow excessive water extractions for wallboard production, which even USG admits would overdraft and destroy the water quality of the Ocotillo-Coyote Wells aquifer. This important aquifer provides the sole source of drinking water for local communities, but the draft Environmental Impact Report/Environmental Impact Statement fails to include a single viable alternative to avoid excessive impacts to it. How can this have been excluded?

23-1

In addition, the proposed new well near the mine site would deplete aquifers and impact water sources on public lands that are essential for the endangered Peninsular bighorn sheep, desert pupfish, and other native species. The proposed mine expansion and increased use of a narrow gauge rail line would also adversely impact public lands that provide essential habitat for the flat-tailed horned lizard, as well as air quality, traffic and visual resources of the area. *None* of these impacts were adequately addressed in the draft EIR/EIS.

23-2

The County and BLM must revise the proposed project and the draft EIR/EIS to include at least one alternative that will adequately protect the water and air quality and biological resources of this fragile desert environment. A revised draft EIR/EIS must also include additional information regarding the current environmental setting and impacts to plants and wildlife, water and air quality, traffic, and visual resources. Without meaningful and searching environmental review, the BLM and County cannot lawfully move forward with the approval process for the proposed mine expansion.

23-3

I urge the BLM and the County to keep in mind your legal duties to protect this natural area for future generations of the public, as well as native plants and wildlife.

Yours truly,

Callie Mack

Bureau of Land Management

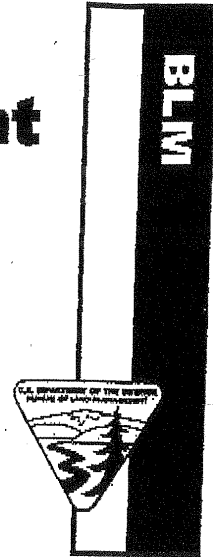
El Centro Field Office

1661 South 4th Street

El Centro, CA 92243

Phone: 760-337-4400

Fax: 760-337-4490



Fax Cover Sheet

To: Iris Davis, Office Assistant III

Phone: 760-482-4236 Fax: 760-353-8338

Office: Planning & Development Services

From: **Linda Self, Realty Specialist**

Phone: **760-337-4426**

Number of pages including cover sheet: 2

Remarks: Attached is a comment letter I received regarding the US Gypsum Modernization/Expansion Project.

Letter 23
Callie Mack, July 14, 2006

Comment 23-1:

Response: The Draft EIR/EIS does not conclude that USG's use of water would "overdraft" and destroy the water quality of the Ocotillo-Coyote Wells Groundwater Basin.

The Draft EIR/EIS considers alternatives within each of the resource analysis areas. These include:

1. The Proposed Action
2. The No Action Alternative
3. Partial use of ID water to offset consumption
4. Full use of IID water to offset consumption

Water resources alternatives are discussed in Volume I, Section 3.3, Hydrology and Water Quality beginning on page 3.3-3 of the Draft EIR/EIS. See also General Responses 4.3.4 and 4.3.5.

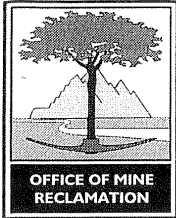
Comment 23-2:

Response: Each of these issues is addressed in the Draft EIR/EIS. With regard to impacts of the Quarry Well No. 3, there are no springs or seeps within the area of the quarry or in the vicinity of the Quarry Well No. 3, located at the margin of the Ocotillo-Coyote Wells Groundwater Basin. Increased pumping at the Quarry, amounting to about 18 acre-feet per year, is minor relative to local irrigation pumping and is unlikely to result in significant loss of groundwater storage. Vegetation and wildlife are addressed in Volume I, Sections 3.4 and 3.5 of the Draft EIR/EIS. The commenter should also refer to General Responses 4.3.1, 4.3.2, and 4.3.3.

Air quality is addressed in Volume I, Section 3.6, Visual Resources in Section 3.7, and Traffic and Circulation in Section 3.11 of the Draft EIR/EIS. Supporting technical data appears in Volume II, Appendices of the Draft EIR/EIS.

Comment 23-3:

Response: Comment noted. See Response 23-1 and 23-2 above.



DEPARTMENT OF CONSERVATION

OFFICE OF MINE RECLAMATION

801 K STREET • MS 09-06 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 323-9198 • FAX 916 / 445-6066 • TDD 916 / 324-2555 • WEBSITE conservation.ca.gov

July 14, 2006

Jurg Heuberger
Imperial County
939 Main Street, Suite B-1
El Centro, CA 92243

RECEIVED
JUL 21 2006
IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Dear Mr. Heuberger:

US Gypsum Company Expansion/Modernization Project
CA Mine ID# 91-13-0004 and 0005 and SCH #2001121133

The Department of Conservation's Office of Mine Reclamation (OMR) has reviewed the Draft EIR/EIS for the US Gypsum Company Expansion and Modernization Project. The applicant is proposing to expand its existing Plaster City Quarry, establish a water supply well for the existing quarry, upgrade an old water line, and expand production facilities at the Plaster City Plant. Annual production for the quarry is estimated to be 1.92 million tons. The quarry site is located approximately 26 miles northwest of Plaster City. The following comments on the DEIR/EIS prepared by Karen Wiese, Plant Ecologist, Beth Hendrickson, Plant Ecologist, and Will Arcand, Engineering Geologist, are offered to assist in your review of this project.

The Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code Section 2710 et seq.) and the State Mining and Geology Board Regulations (California Code of Regulations (CCR) Title 14, Division 2, Chapter 8, Subchapter 1) require that specific items be addressed or included in reclamation plans. The reclamation plan included in the DEIR/EIS is the same plan for which OMR provided comments in a letter dated June 24, 2003 (enclosed). Since the plan has not been amended those comments still stand, except for comment #8, which is addressed by the hydrology data provided with the DEIR/EIS. We recommend that the reclamation plan be supplemented to fully address these items.

24-1

OMR policy now requires that all reclamation plans submitted for formal 30-day review be certified as complete by the lead agency. In your cover letter for the amended reclamation plan, please include a statement that the plan is certified complete in compliance with Article 1 of Chapter 8 of Division 2 of Title 14 of the California Code of Regulations.

24-2

Comments on the DEIR/EIS:

Page 2.0-50. The proposed well #3 location and pipeline are not shown on Figure 2.0-1 as stated in the text. 24-3

Figure 2.0-16. The topsoil stockpile is shown as still present on the "reclaimed" mine site cross section. A description of the final disposition of topsoil that is not used in reclamation (if any) should be provided. 24-4

Page 2.0-63. The photos cited in the text do not provide objective evidence of the success of "natural" revegetation. Scientifically defensible sampling with specific measures of cover, density and species richness is required in order to compare the "naturally revegetated" slopes with the surrounding undisturbed vegetation. 24-5

Section 3.2.3. The text indicates that a slope stability analysis was completed for the Quarry site, and static and pseudostatic slope stability factors of safety are reported. A slope stability analysis report is not included or specifically referenced within Volume I or II of the DEIR/EIS. The slope stability analysis that has been prepared, stamped, and signed by a qualified professional licensed to practice in California should be provided with the EIR/EIS and reclamation plan. 24-6

Page 3.1-7 and 3.4-3. The text states that none of the three special status plant communities occur on or near the Quarry or Plant site "or along the linear water line easement or narrow-gauge railroad right-of-way. This is contradicted by the Biological Technical Report in Appendix C1, which states on page 7 that mesquite bosque occurs in a few patches near the rail line. 24-7

Section 3.4.2.1. Surveys for sensitive plant species were inadequate. The 1995 surveys covered only a relatively small portion of the quarry site and none of the plant site, railroad or water line. The report states that 2002 rainfall was much below average and few annual plant species could be detected. Surveys on the railroad and water line rights-of way were done by car, a poor way to detect many small annual plants. The report states that about 40 person-hours were spent on sensitive plant surveys on the quarry site over five site visits between January and April 2002. Given the complex geography of the site and the size of the survey area (2048 acres) additional survey efforts may be needed to draw accurate conclusions about the absence of sensitive species. 24-8

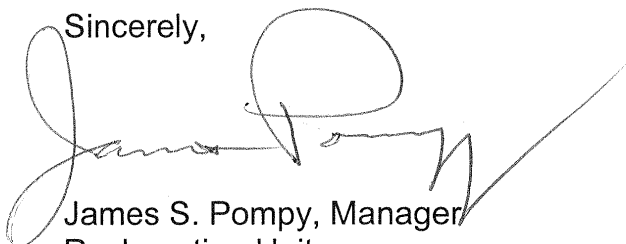
Since 2002, there have been four years in which additional surveys could have been done. The original surveys are out of date (more than 3 years old). Follow-up surveys are warranted, according to the California Dept. of Fish and Game guidelines for sensitive plant surveys (enclosed).

According to the Biological Technical Reports, a number of sensitive species have a moderate or greater probability of occurrence on the quarry, railroad, waterline, and plant site. Three of these are species on the California Native Plant Society List 1B, and should be treated as if they were listed; likewise the ten (not eight, as on page 3.4-22) List 2 plants potentially present on the plant site, water line and railroad and the eight List 2 plants potentially present on the Quarry site.

24-9

If you have any questions on these comments or require any assistance with other mine reclamation issues, please contact me at (916) 323-8565.

Sincerely,

A handwritten signature in black ink, appearing to read "James S. Pompy". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke.

James S. Pompy, Manager
Reclamation Unit

Enclosure

Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities

State of California
THE RESOURCES AGENCY
Department of Fish and Game
December 9, 1983
Revised May 8, 2000

The following recommendations are intended to help those who prepare and review environmental documents determine **when** a botanical survey is needed, **who** should be considered qualified to conduct such surveys, **how** field surveys should be conducted, and **what** information should be contained in the survey report. The Department may recommend that lead agencies not accept the results of surveys that are not conducted according to these guidelines.

1. Botanical surveys are conducted in order to determine the environmental effects of proposed projects on all rare, threatened, and endangered plants and plant communities. Rare, threatened, and endangered plants are not necessarily limited to those species which have been "listed" by state and federal agencies but should include any species that, based on all available data, can be shown to be rare, threatened, and/or endangered under the following definitions:

A species, subspecies, or variety of plant is "endangered" when the prospects of its survival and reproduction are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, or disease. A plant is "threatened" when it is likely to become endangered in the foreseeable future in the absence of protection measures. A plant is "rare" when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens.

Rare natural communities are those communities that are of highly limited distribution. These communities may or may not contain rare, threatened, or endangered species. The most current version of the California Natural Diversity Database's List of California Terrestrial Natural Communities may be used as a guide to the names and status of communities.

2. It is appropriate to conduct a botanical field survey to determine if, or to the extent that, rare, threatened, or endangered plants will be affected by a proposed project when:

- a. Natural vegetation occurs on the site, it is unknown if rare, threatened, or endangered plants or habitats occur on the site, and the project has the potential for direct or indirect effects on vegetation; or
- b. Rare plants have historically been identified on the project site, but adequate information for impact assessment is lacking.

3. Botanical consultants should possess the following qualifications:

- a. Experience conducting floristic field surveys;
- b. Knowledge of plant taxonomy and plant community ecology;
- c. Familiarity with the plants of the area, including rare, threatened, and endangered species;
- d. Familiarity with the appropriate state and federal statutes related to plants and plant collecting; and,
- e. Experience with analyzing impacts of development on native plant species and communities.

4. Field surveys should be conducted in a manner that will locate any rare, threatened, or endangered species that may be present. Specifically, rare, threatened, or endangered plant surveys should be:

- a. Conducted in the field at the proper time of year when rare, threatened, or endangered species are both evident and identifiable. Usually, this is when the plants are flowering.

When rare, threatened, or endangered plants are known to occur in the type(s) of habitat present in the project

area, nearby accessible occurrences of the plants (reference sites) should be observed to determine that the species are identifiable at the time of the survey.

b. Floristic in nature. A floristic survey requires that every plant observed be identified to the extent necessary to determine its rarity and listing status. In addition, a sufficient number of visits spaced throughout the growing season are necessary to accurately determine what plants exist on the site. In order to properly characterize the site and document the completeness of the survey, a complete list of plants observed on the site should be included in every botanical survey report.

c. Conducted in a manner that is consistent with conservation ethics. Collections (voucher specimens) of rare, threatened, or endangered species, or suspected rare, threatened, or endangered species should be made only when such actions would not jeopardize the continued existence of the population and in accordance with applicable state and federal permit requirements. A collecting permit from the Habitat Conservation Planning Branch of DFG is required for collection of state-listed plant species. Voucher specimens should be deposited at recognized public herbaria for future reference. Photography should be used to document plant identification and habitat whenever possible, but especially when the population cannot withstand collection of voucher specimens.

d. Conducted using systematic field techniques in all habitats of the site to ensure a thorough coverage of potential impact areas.

e. Well documented. When a rare, threatened, or endangered plant (or rare plant community) is located, a California Native Species (or Community) Field Survey Form or equivalent written form, accompanied by a copy of the appropriate portion of a 7.5 minute topographic map with the occurrence mapped, should be completed and submitted to the Natural Diversity Database. Locations may be best documented using global positioning systems (GPS) and presented in map and digital forms as these tools become more accessible.

5. Reports of botanical field surveys should be included in or with environmental assessments, negative declarations and mitigated negative declarations, Timber Harvesting Plans (THPs), EIR's, and EIS's, and should contain the following information:

- a. Project description, including a detailed map of the project location and study area.
- b. A written description of biological setting referencing the community nomenclature used and a vegetation map.
- c. Detailed description of survey methodology.
- d. Dates of field surveys and total person-hours spent on field surveys.
- e. Results of field survey including detailed maps and specific location data for each plant population found. Investigators are encouraged to provide GPS data and maps documenting population boundaries.
- f. An assessment of potential impacts. This should include a map showing the distribution of plants in relation to proposed activities.
- g. Discussion of the significance of rare, threatened, or endangered plant populations in the project area considering nearby populations and total species distribution.
- h. Recommended measures to avoid impacts.
- i. A list of all plants observed on the project area. Plants should be identified to the taxonomic level necessary to determine whether or not they are rare, threatened or endangered.
- j. Description of reference site(s) visited and phenological development of rare, threatened, or endangered plant(s).
- k. Copies of all California Native Species Field Survey Forms or Natural Community Field Survey Forms.
- l. Name of field investigator(s).
- m. References cited, persons contacted, herbaria visited, and the location of voucher specimens.

Letter 24

Department of Conservation Office of Mine Reclamation, July 14, 2006

Comment 24-1:

Response: The County lead agency will consider the Department of Conservation (DOC) comments and will incorporate revisions as needed to comply with DOC at the conclusion of the CEQA/NEPA process.

Comment 24-2:

Response: Comment noted. The lead agency will comply with Article 1 of Chapter 8 of Division 2 of Title 14 of the California Code of Regulations should the Reclamation Plan be certified.

Per the DOC's request, the County will not submit an amended Reclamation Plan for the Project until it is complete.

Comment 24-3:

Response: This statement is correct. Figure 2.0-1 does not show the Well No. 3 location or pipeline. Figure 2.0-1 is a depiction of Project components at a scale too large to depict the well. The information is better depicted in Figure 3.3-18, page 3.3-95 of Section 3.3, Hydrology and Water Quality of the Draft EIR/EIS and 3.5-2, page 3.5-7 of Section 3.5, Wildlife of the Draft EIR/EIS.

Comment 24-4:

Response: The comment is correct. The figure shows a typical quarry cross-section at the completion of mining, before reclamation. Per the Reclamation Plan, the Overburden Berm, consisting of subsoil would remain in place for purposes of flood flow diversion. The topsoil stockpile would be utilized in resoiling and vegetating the west wash perimeter. One hundred percent of the salvaged topsoil would be utilized at reclamation.

Comment 24-5:

Response: The photos presented are a depiction of the existing conditions as of 2004. USG did recontour the slopes and monitor the natural revegetative process over a period of time measuring cover, density and species richness on-site.

The Mine Reclamation Plan, Revegetation Plan does not propose natural revegetation but a systematic process of contouring, soil preparation, seeding and monitoring (see Mine Reclamation Plan, revised June 2003).

Comment 24-6:

Response: The Slope Stability report appears as Appendix 5 of the Reclamation Plan referenced in the Draft EIR/EIS. It was prepared by an appropriately qualified professional.

Comment 24-7:

Response: The comment is correct. This correction has been made to Appendix C1.

Comment 24-8:

Response: Follow-up botanical surveys were conducted in 2003 and 2005, which both were better rainfall years than 2002. See Response to Comment 20-27.

Comment 24-9:

Response: CEQA Guidelines require a “mandatory finding of significance” for substantial adverse impacts to rare, threatened or endangered species. The Guidelines further define these terms to apply to state or federally listed rare, threatened or endangered species or to species which meet the criteria for listing as described in the state or federal Endangered Species Acts. The commenter refers to plants on the California Native Plant Society’s List 1B and List 2, described in Appendices C1 and C2 of the Draft EIR/EIS. None of these species were found on the project site during field surveys reported in the Draft EIR/EIS or in follow-up surveys. If one or more were present, adverse impacts would **not** meet CEQA criteria for “mandatory findings of significance.”



Letter 25

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

July 14, 2006

Linda Self
El Centro Field Office
Bureau of Land Management
1661 S. 4th Street
El Centro, CA 92243

RECEIVED
JUL 21 2006
IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Subject: Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR)
for the United States Gypsum Company Expansion/Modernization Project,
Imperial County, California [CEQ #20060138]

Dear Ms. Self:

The U.S. Environmental Protection Agency (EPA) has reviewed the above referenced document. Our review and comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementation Regulations at 40 CFR 1500-1508, and Section 309 of the Clean Air Act.

EPA has rated this Draft EIS/EIR as EC-2 – Environmental Concerns-Insufficient Information (see the enclosed "Summary of Rating Definitions"). EPA is concerned the proposed project could have adverse impacts to watershed resources, including water quality and habitat, groundwater quality and quantity, and air quality. These impacts should be avoided in order to fully protect the environment. We believe there may be other alternatives or further opportunities to avoid or mitigate impacts to waters of the U.S., groundwater resources, and air quality. These should be addressed in the Final EIS/EIR.

25-1

We appreciate the opportunity to review this Draft EIS/EIR and request a copy of the Final EIS/EIR when it is officially filed with our Washington, D.C., office. If you have any questions, please call me at (415) 972-3988, or have your staff call Jeanne Geselbracht at (415) 972-3853.

Sincerely,

Duane James, Manager
Environmental Review Office

004814

Enclosures: (1) EPA's Summary of Rating Definitions
(2) EPA's Detailed Comments

Cc: Jurg Heuberger, Imperial County Planning and Development Services
Robert Smith, U.S. Army Corps of Engineers

U.S. Gypsum Company Expansion/Modernization Project Draft EIS/EIR
EPA Comments – July 2006

Waters of the United States

The Draft EIS/EIR (pp. 3.3-101 and 102) briefly addresses the drainage diversion that future quarry operations will require in Fish Creek Wash. However, the document does not describe the wash or discuss in detail how the wash would be affected by the proposed project. Additionally, the Draft EIS/EIR does not include a large-scale map clearly depicting and labeling the surface waters in the project vicinity or locations of the proposed drainage diversions throughout future quarrying phases in the gypsum outcrop and alluvium areas. The Draft EIS/EIR also does not indicate whether or how the pipeline projects would affect waters of the U.S.

25-2

Recommendation: The Final EIS/EIR should describe all waters of the U.S. and discuss how they could be affected by the project, including past impacts. The discussion should include acreages and channel lengths, habitat types, values, and functions of these waters. The discussion should also reference project-scale maps that clearly depict these waters and their proximity to each part of the project (e.g., pipelines, quarries, roads, etc.). The maps should also depict the existing channel diversions as well as proposed channel diversions for all future quarrying phases.

Recommendation: The Final EIS/EIR should address opportunities for improving the quality and quantity of affected wetlands in designing facilities.

25-3

It appears that activities involved in the proposed mine expansion would involve the discharge of dredged or fill material into waters of the United States and, therefore, require authorization by the U.S. Army Corps of Engineers (Corps) and compliance with the substantive environmental criteria of the Federal Guidelines (Guidelines) at 40 CFR 230 promulgated under Section 404(b)(1) of the Clean Water Act. The Draft EIS/EIR does not provide sufficient information on avoidance alternatives, the aquatic resources at risk, or project-related impacts to waters of the United States, including wetlands.

25-4

If a Section 404 permit is required, EPA will review the project for compliance with the 404(b)(1) Guidelines. Pursuant to 40 CFR 230, any permitted discharge into waters of the U.S. must be the least environmentally damaging practicable alternative available to achieve the project purpose.

Recommendation: The Final EIS/EIR should identify all required Federal and State permits for work potentially affecting wetlands or waters of the U.S.

Recommendation: The Final EIS/EIR should include an evaluation of the project alternatives in order to demonstrate the project's compliance with the 404(b)(1) Guidelines. If, under the proposed project, dredged or fill material

25-5

would be discharged into waters of the U.S., the Final EIS/EIR should describe the potential environmental impacts and discuss alternatives to avoid or minimize those discharges.

25-5
Con't.

Recommendation: If a discharge is permitted, required mitigation for impacts to waters of the U.S. should be identified and committed to in the Final EIS/EIR and Record of Decision (ROD) for evaluation by the public and decision-makers. Mitigation should be implemented in advance of the impacts to avoid habitat losses due to the lag time between the occurrence of the impact and successful mitigation. The discussion should include the following information:

- Acreage and habitat type of waters of the U.S. that would be created or restored;
- Water sources to maintain the mitigation area;
- The revegetation plans including the numbers and age of each species to be planted;
- Maintenance and monitoring plans, including performance standards to determine mitigation success;
- The size and location of mitigation zones;
- The parties that would be ultimately responsible for the plan's success; and
- Contingency plans that would be enacted if the original plan fails.

25-6

Groundwater Resources

The Draft EIS/EIR discusses the potential for the proposed project to mobilize total dissolved solids (TDS) in groundwater. While it also acknowledges that other contaminants of concern (i.e., fluoride, boron, and iron) are found in the groundwater, the Draft EIS/EIR does not discuss how drawdown from the project could affect the concentration of these other contaminants in area wells.

Recommendation: The Final EIS/EIR should discuss the extent to which groundwater drawdown from the proposed project could mobilize other contaminants and affect their concentrations in area wells. If these contaminants could be mobilized as well, the Final EIS/EIR and ROD should commit to appropriate mitigation measures and identify mitigation action levels for these contaminants.

25-7

It is unclear from the Draft EIS/EIR whether additional opportunities exist to increase water efficiency and/or reduce water demand at the Plaster City Plant or the quarry, or whether any of the wastewater can be treated and either reused or recharged. All opportunities to conserve, reuse, and recycle water should be seriously considered, especially in light of the scarcity of usable water in the project vicinity.

25-8

Recommendation: The Final EIS/EIR should explore and evaluate opportunities to increase water efficiency, reduce water demand, and treat and reuse or recharge water to the extent practicable. The Final EIS/EIR and ROD should include commitments to achieve these measures.

The Draft EIS/EIR (section 2.6.5.1) discusses an alternative that involves drilling new production wells in the vicinity of the Plaster City plant. It appears, however, that groundwater within only one mile of the plant was evaluated for this purpose. It is unclear whether groundwater up to a few miles from the plant is of higher quality and could be used for the project.

25-9

Recommendation: The Final EIS/EIR should discuss whether groundwater up to a few miles from the plant could be used to supply the plant. The discussion should also address whether the TDS concentration in that groundwater is sufficiently lower than TDS in groundwater at the plant such that it could be blended with water from the existing wells in the Ocotillo/Coyote Wells Groundwater Basin for project needs.

Air Quality

The Draft EIS/EIR includes several important and effective measures to reduce and control air emissions from the proposed project. For the pipeline and well construction projects, the document mentions “standard construction measures,” including an onsite water truck, to reduce dust during those activities. Additional opportunities exist to reduce air emissions.

25-10

Recommendation: We recommend that the mitigation measures (3.6-1a, 1b, and 1-c) that will be used for quarry operations also be applied to pipeline and well construction projects.

Recommendation: We also recommend the following measures to reduce dust at the construction sites.

- Vehicles hauling soil or other loose materials will be covered with tarp or other means;
- Cover or apply soil stabilizers to exposed stock piles;
- Sweep adjacent paved streets with water sweepers in the event soil materials are carried onto them;
- Limit traffic speeds in the construction area and along access roads;
- Cover or apply soil stabilizers to disturbed areas within five days of completion of the activity at each site; and
- Reclaim and revegetate disturbed areas as soon as practicable after completion of activity at each site.

25-11

Letter 25
U.S. Environmental Protection Agency – Region IX, July 14, 2006

Comment 25-1:

Response: Alternatives to the proposed action analyzed in the Draft EIR/EIS include:

- No Action Alternative
- Partial use of IID water to offset consumption
- Full use of IID water to offset consumption

These alternatives were fully vetted with the County, BLM, and the public. The fact that the Plant is fully constructed, the Quarry is in operation and much of the infrastructure is in place, precludes the viability of revised design alternative typical in Greenfield projects.

USG has applied to the IID for use of Colorado River water from the Westside Main Canal.

Comment 25-2:

Response: Vegetation and habitat in the unnamed wash are described in the Vegetation and Wildlife sections of the Draft EIR/EIS (Sections 3.4 and 3.5) and in Appendices C-2 (Biological Technical Report) and C-3 (Revegetation Plan). In addition the Draft EIR/EIS incorporates by reference the Mine Reclamation Plan, which describes the Proposed Action including scaled plot plans depicting existing conditions and proposed structural changes. Cross-sections are also provided. The unnamed wash on-site is a tributary to Fish Creek and ultimately tributary to the Salton Sea. Discharge of dredge or fill material in the wash (e.g., by digging and transporting overburden and gypsum) would likely necessitate notification to the U.S. Army Corps of Engineers and perhaps project permitting under Section 404 of the federal Clean Water Act depending on agency response to recent Supreme Court decisions. If required, a delineation of jurisdictional waters of the United States will be submitted with the notification or permit application.

Recommendations noted.

Comment 25-3:

Response: This project is in an extreme desert environment. There has been no formal delineation of jurisdictional area but no indicators of wetland hydrology, soils, or vegetation have been noted to date and no impacts to wetlands are expected. The Draft EIR/EIS does not indicate adverse impacts to wetlands.

Comment 25-4:

Response: See Response to Comment 25-2 above.

There are no known wetlands within the Project area. Technical documentation is presented in Volume II, Appendices of the Draft EIR/EIS.

Federal and State agencies potentially responsible for wetlands or waters of the U.S. include:

- U.S. Environmental Protection Agency (EPA)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Army Corps of Engineers (ACOE)
- California Regional Water Quality Control Board (RWQCB)
- California Department of Conservation, Office of Mine Reclamation (DOC/OMR)

Of the above referenced agencies, identified on page 5.0-3 of the Draft EIR/EIS, all but the ACOE have been contacted or notified of the proposed action and many have responded. A 404 permit application is anticipated for the Quarry plan if conditioned and approved.

Comment 25-5:

Response: The only material removed from the dry wash in question is alluvial deposits, granitic overburden, and gypsum. Alluvium will be stockpiled and reintroduced to the west slope of the Quarry face for revegetation purposes. Project alternatives are described and analyzed in the Draft EIR/EIS. Discharge of dredge or fill material in the wash (e.g., by digging and transporting overburden and gypsum) would affect various resources including vegetation, habitat, and hydrologic conditions as described in the Draft EIR/EIS. Alternatives and measures to minimize those effects are also discussed in the Draft EIR/EIS.

Proposed below-grade mining in the unnamed open alluvial wash would involve removing alluvial material to reach underlying gypsum deposits. The wash may meet jurisdictional criteria as Waters of the United States under Section 404 of the Clean Water Act. The wash clearly would not meet jurisdictional criteria as wetlands. The wash may meet California Fish and Game Code (Section 1600) criteria as a "streambed." USG does not anticipate beginning below-grade gypsum mining until Phase 1A is benched to grade. See Mine Reclamation Plan, June 2003, page 27. Prior to initiating any below-grade mining, or any other activities in the wash that could be considered dredge or fill activity or streambed alterations, USG will contact the U.S. Army Corps of Engineers and the California Department of Fish and Game to

determine jurisdictional boundaries and apply for appropriate permits if needed under state or federal law.

Comment 25-6:

Response: The Project Revegetation Plan is included in Appendix C-3 of the Draft EIR/EIS, though Imperial County and BLM may add further conditions per recommendations of the California Department of Conservation, Office of Mine Reclamation. The plan was written in part to replace vegetation and habitat values in the ephemeral wash, including any jurisdictional waters of the United States in the wash. As applicable, plan details listed in the comment are in the Revegetation Plan. See Reclamation Plan, June 2003.

Comment 25-7:

Response: Draft EIR/EIS section 3.3.3.5 is a discussion of water quality, including specific constituents and illustrating the water quality types in a Piper diagram. The text notes that the local groundwater quality types cluster together on the Piper diagram, indicating similar water quality types. TDS is pointed out as a distinguishing factor. TDS is a useful general indicator of change in water quality, as it includes all dissolved constituents (or at least major dissolved constituents depending on analysis). Mitigation Measure 3.3-2 on page 3.3-78 specifies TDS. Nonetheless, the impacts of specific constituents also is recognized and the Groundwater Monitoring Program (page 3.3-86 paragraph three) states that at a minimum, the analysis will include pH, electrical conductivity, TDS, alkalinity, sodium, potassium, calcium, magnesium, chloride, sulfate, bicarbonate, carbonate, fluoride, bromide, boron, and iron. See General Response 4.3.6 for additional discussion of selected water quality constituents.

Comment 25-8:

Response: Many improvements already have been made at the Plant and within the company to reduce water consumption. Most of these have focused on process water as the major water use (about 95% of total water use). Indoor domestic and outdoor water uses are quite limited and accordingly, conservation opportunities also are limited. Currently, process wastewater is collected and reused in the process; there is no discharge of process water from the Plant. A small amount of water is used to clean adhesives from machinery, collected and removed by a licensed hauler and handler. In the past, equipment bearings were cooled using water that was not recycled. The Plant has moved away from the use of an open water cooling system and now all water-cooled systems are enclosed, with no cooling water disposal. In addition, USG has streamlined its procedures to repair leaks along its pipeline much more quickly, so less water is lost. Most importantly, USG has an ongoing effort to decrease the production cost of each sheet of wallboard that is manufactured

at Plaster City. Reductions in wallboard weight have been made through the use of USG proprietary and patented formulation changes and raw material substitutions, resulting in decreased amounts of water necessary per unit of production. Because most of the energy use at the facility is to drive water out of the process, USG has implemented innovative technologies to use less water in its processes and thereby use less energy and water. Feasible water conservation measures have already been implemented, and given the uncertainty of success of ongoing technological research, no additional specific water conservation measures are identified as part of the EIR/EIS.

Comment 25-9:

Response: The inadequacies of the water beneath the Plant were addressed in a letter to Jurg Heuberger, Planning Director, Imperial County Planning and Building Department dated August 13, 2004 entitled "US Gypsum's Plaster City Test Well Pumping Tests" and is attached hereto. Conclusions are as follows:

Aquifer pumping test results showed that the hydraulic conductivity of the aquifer was low (0.4 to 0.5 ft/day), and because the aquifer is relatively thin (less than 300 feet thick), a larger number of wells would be needed over a larger area to provide the quantity of water needed for USG's operation. However, more significantly, water quality data showed that groundwater sodium chloride concentrations are much higher than is acceptable for use in the Plaster City Plant. Lab results show TDS of 9,678 mg/L and a specific conductivity of 13,700. Specific conductivity measurements, which estimate the total dissolved solids, taken during the pumping tests remained high and generally unchanged to the end of the tests. Chloride is a problem with wallboard construction. Lab results showed chloride concentrations to be 3,258 mg/l. Thus the consideration of the use of this water on a blending basis with other waters of lower salinity is impractical due to the excessive high salinity of this water. Only a very small amount of this poor water could be used, if any.

The geology of the area is such that all of the area east of the Elsinore and Laguna Salada faults to the Westside Canal is high salinity groundwater.

Comment 25-10:

Response: These mitigation measures will apply to all construction activities utilizing diesel equipment and trucks. Mitigation measure impacts 3.6-4 have been modified to reflect this mitigation, page 3.6-45. Also see General Response 4.3.10.

Comment 25-11:

Response: ICAPCD adopted Rules 800 through 805 on November 8, 2005 (see General Response 4.3.10). These rules will reduce the projects dust impacts to less than significant. USG is required to implement applicable dust control measures listed in these rules and in its operating permits for all of its operations at the Quarry and Plant and for construction activities for the pipeline and wells.



United States Gypsum Company
P.O. Box 2450
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El Centro, CA 92244-2450
760 358-3200
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July 14, 2006

Mr. Jurg Heuberger
Planning Director
Imperial County Building and Planning Department
801 Main St.
El Centro, CA 92243-2856

Dear Mr. Heuberger:

This letter provides United States Gypsum Company's (USG) comments on the Draft Environmental Impact Report/Environmental Impact Statement for the United States Gypsum Company Expansion/Modernization Project (DEIR/EIS).

INTRODUCTION

The "Proposed Action"

The project discussed in the DEIR/EIS concerns the expansion and modernization of USG's Plaster City plant (Plant) and associated quarry operations in the Fish Creek Mountains (Quarry). Among other things, the project includes the replacement of older, less efficient production facilities with a new state of the art high-speed wallboard line at the Plant and various improvements to the facilities at the Quarry. The project will allow USG to continue to meet current and future demand for gypsum building products throughout the region and to further develop its existing gypsum reserves at the Quarry in an environmentally-sensitive manner. Additionally, the project has directly created more than 140 new local jobs and will generate tens of millions of dollars of business for local suppliers in an area with relatively few local, well-paying, secure employment opportunities.

This DEIR/EIS is unique in that it reviews the impacts associated with a project that, in large part, has already been implemented. This unique circumstance arises because most of the improvements described in the document were constructed pursuant to permits issued by the County over six years ago. Some of these permits were based on the County's 1998 decision to adopt a negative declaration for the project, which was challenged in a lawsuit filed by the Sierra Club. After the Superior Court upheld the County's decision, USG obtained grading and building permits from the County and proceeded with the construction of the new facilities. However, in late 2000, the California Court of Appeal reversed the judgment of the Superior Court and ordered that an EIR be prepared. By that time, the improvements had already been completed, the old number 2 board line removed and the new number 3 board line was in operation. Understanding these unique circumstances helps shed light on the potential environmental impacts of the project (if any) since there is actual operational history to evaluate when assessing the effects of this project on the environment.

USG's Environmental Commitment

USG recognizes the importance of safeguarding the environment. Our solid history of environmental responsibility includes providing product solutions that reduce environmental impacts, reduce waste, conserve resources and recycle materials whenever possible. We not only use abundant mineral resources such as perlite and gypsum, but also use renewable agricultural sources to obtain raw materials for our building products. Also, 35% (across the whole U.S.) of the gypsum material we use for wallboard and plaster products is recycled flue gas desulfurization gypsum. This allows USG to preserve valuable natural resources while supporting clean air and reducing the amount of materials that need to be disposed of in landfills. USG plants recycle off specification materials back into the manufacturing process. USG also manufactures products that are environmentally friendly, safe and effective when used as intended.

USG has a long history of manufacturing products with low-environmental impact technologies. In fact, the company utilized environmental control equipment since before the Clean Air Act was passed in 1970. Wherever possible, plants consume clean fuels, such as low-sulfur oil or natural gas. Water treatment equipment installed at USG paper mills and ceiling tile plants recycles water and reduces discharges to municipal treatment systems. And the company actively conserves energy by recycling heat.

USG is active in a variety of environmental organizations. We remain one of the founding members of the U.S. Green Building Council in 1993 and participate in construction recycling demonstration projects with the National Association of Home Builders.

Specifically, we use recycled and sustainable raw materials in major product formulations and development. Our ceiling panel products, for example, range from 25-95 percent recycled content (based on a weighted average of component materials) and our DONN® Brand™ ceiling grid systems have a recycled content of 90 percent for aluminum suspension systems and 25 percent for steel suspension systems.

By way of concrete examples, USG: (1) developed the largest wetlands mitigation project in Michigan, (2) voluntarily conducted a cleanup of arsenic contaminated material in Tacoma, WA prior to any regulations requiring the cleanup and earned the State's "Environmental Citizen of the Year" award, (3) completed an award winning underground mine reclamation at the Locust Cove Mine in Virginia, and (4) has invested \$15 million in road relocation and mine subsidence programs at Plasterco, VA.

In Plaster City specifically, USG has consistently strived to reduce its water consumption, clean the air and eliminate unaesthetic features of the Plant. Plaster City no longer has waste water (other than sanitary) effluent from the facility, as all water is utilized in the operations. Raw gypsum material is no longer openly stored. It is now in enclosed structures to reduce particulate emissions. Fundamental processes at the Plant have been modified to use energy more

efficiently, such as directly using waste heat from the process to dry product. Additionally, we are now assessing the viability of using wind energy at the Plant.

COMMENTS ON THE DEIR/EIS

USG provides the following comments on the DEIR/EIS to assist the decision-makers and the public to more fully understand and appreciate the premises, foundations and conclusions contained in the document.

I. Hydrology and Water Quality

A. The DEIR/EIS's Description of Baseline Conditions is Misleading.

In evaluating the potential impacts of the project on groundwater resources, the DEIR/EIS states that the "baseline" conditions for pumping from USG's wells in the Ocotillo/Coyote Wells Groundwater Basin (Basin) is "considered" to be 347 acre-feet per year, which is apparently the average water production for the period from 1994 through 1998. [DEIR/EIS, p. 3.3-34.] In other words, the DEIR/EIS attributes any increase in groundwater pumping above 347 acre-feet per year (and any potential impacts associated with such an "increase") to the project.

We understand that the 347 acre-feet per year figure was used in the Ocotillo/Coyote Wells Groundwater Basin Hydrology and Groundwater Modeling Study (Bookman-Edmonston, 2004), which is an appendix to the DEIR/EIS. Use of this assumed (and overly conservative) 347 acre-feet per year value may be appropriate for purposes of a model which, as an analytical tool, can be helpful in predicting the potential effects of different groundwater pumping scenarios on groundwater levels and water quality over the 80 year "life" of the project. However, the DEIR/EIS's use of the contrived production value of 347 acre-feet per year from USG's wells as the "baseline" condition for purposes of assessing the project's potential effects on groundwater resources is misleading and inappropriate, for several reasons.

First, groundwater production values from USG's wells in the Basin have fluctuated considerably over the years based on a variety of factors. As shown on Table 3.3-4 of the DEIR/EIS, groundwater use during the period from 1925 to 1998 varied from a low of 153 acre-feet per year in 1946 to a high of 767 in 1972. This table also shows that, during the period from 1976 to 1998, the average annual water production was 431 acre-feet per year, 24% higher than 347 acre-feet per year. Because groundwater usage fluctuates over time, the DEIR/EIS's use of the average water usage over a five-year period as the "baseline" condition is arbitrary and misleading. *See Fairview Neighbors v. County of Ventura*, 70 Cal.App.4th 238, 243 (1999) (holding that discussing the possible environmental effects of a mining project based on actual traffic counts would have been misleading and illusory because the flow of traffic of mining operation fluctuates considerably based on need, capacity, and other factors).

Second, the lower groundwater production values reflected in DEIR/EIS Table 3.3-4 for the years 1994 through 1998 are directly related to USG's on-going efforts to conserve water, including closing the employee town at Plaster City in the 1980s, using water more efficiently

26-1

during production so no waste water is discharged from the facility and more quickly identifying and fixing any leaks in the water line from Ocotillo. Limiting consideration of USG's water production to this five-year period only, in effect, unfairly penalizes USG for becoming more efficient in its transport, storage and use of water.

26-1
Con't.

Third, under the County's Groundwater Management Ordinance, USG has a priority right to use groundwater from the Basin up to its maximum rate of use occurring within the 30 years prior to the effective date of the ordinance, subject only to the superior rights of overlying domestic uses. [County Code, Section 92204.00.] On March 8, 2006, the County approved the registration of USG's three wells in the Basin and confirmed USG's maximum historic usage (and priority under the Groundwater Management Ordinance) of 767 acre-feet per year. [Attached as Exhibit A.] The County's letter approving USG's registration of these wells also states that a conditional use permit would be required "[i]n the event USG increases the water extraction above the 767 acre-feet per year limit" In other words, USG has (and has always had) the right to increase production from its wells to up to 767 acre-feet per year without the need for a conditional use permit or other governmental approval, and in fact has a priority over all users (other than overlying domestic users) up to this amount. Under these circumstances, we believe that the most appropriate "baseline" for assessing potential impacts on the Basin is 767 acre-feet per year. See *Fairview, supra*, 70 Cal.App.4th at 243.

Because the project does not propose to increase groundwater usage above the correct "baseline" amount of 767 acre-feet per year, we submit that the project will not have a significant effect on any groundwater resource. Moreover, even if a lower "baseline" figure is used (e.g., 400 acre-feet, which is identified on page 2.0-17 of the DEIR/EIS as the approximate water usage at the Plant in 1998), we believe that the project will not have a significant and unavoidable impact on groundwater resources for the reasons discussed below.

B. The Project Will Not Have a Significant and Unavoidable Impact on "Basin-Wide" Groundwater.

26-2

The DEIR/EIS acknowledges that the project's potential impacts on existing wells in the Ocotillo/Coyote Wells Groundwater Basin can be reduced to a level of insignificance by implementing specified mitigation measures. Nonetheless, the DEIR/EIS concludes that the project will have a significant and *unavoidable* "basin-wide" impact on groundwater. We disagree with this latter conclusion for the reasons discussed below.

1. Declining Groundwater Levels

The DEIR/EIS states that the project will have a significant and unavoidable impact on the Basin because increased pumping of USG wells will lower the water level over a broad area of the Basin where the water table is already declining. In our view, there is no factual or legal basis for this conclusion. Specifically:

- The DEIR/EIS's conclusion is based in large part on the observation that water level "drawdowns" of "several tens of feet" occurred in Ocotillo and Yuha Estates as a result of

26-2-1

increased pumping of groundwater for export to Mexico in the 1970's and 1980's and that the water levels did not recover (or recovered very slowly) once the pumping ceased. [DEIR/EIS, p. 3.3-75 through 3.3-76.] However, as noted in the DEIR/EIS, the Yuha Estates area consists predominately of older, less permeable formations. [DEIR/EIS, p. 3.3-76]. For this reason, the effect of past pumping in the Yuha Estates area is not a good indicator of the potential for groundwater levels to recover in Ocotillo since the geologic formations in Ocotillo are relatively more permeable and water moves more easily through such formations. Furthermore, with regard to past pumping at Ocotillo, it should be noted that even with long term (half a century) pumping at relatively high rates in the USG wells in Ocotillo, no significant or unavoidable impact has been identified. Similarly, once water pumping at the Clifford Well/McDougal Water Co. (well 16S/9E-25K2) in Ocotillo ceased, water levels essentially recovered. See DEIR/EIS Figure 3.3-9.

26-2-1
Con't.

- The DEIR/EIS states that above average precipitation has occurred in recent years and notes that this precipitation has not affected Basin groundwater levels. However, the Basin recharge is known to be from the Jacumba Mountains, a substantial distance away from the wells. Also, as acknowledged in the DEIR/EIS, groundwater moves extremely slowly. Memorandum from Dick Rhone and Ron Schnabel of Bookman-Edmonston, dated July 11, 2006 (July 2006 B-E Memo), attached as Exhibit B. As such, increased rainfall for a twenty-year period would not be expected to affect water levels for many decades and the relevance of this statement in the DEIR/EIS is dubious. It should also be noted that an extremely high amount of rainfall occurred in 1982. The fact that Basin groundwater levels did not show any response to this event indicates that there is virtually no deep percolation of rainfall in the Ocotillo area of the Basin.

26-2-2

- The DEIR/EIS states: "The only empirical point of comparison to [the proposed] magnitude of pumping over a long duration is the pumping that occurred in Ocotillo and Yuha Estates in the 1970's and 1980's for export to Mexico." [DEIR/EIS, p. 3.3-75.] On the contrary, USG pumped considerably more water from its wells in the Basin over a much longer time period with no adverse impact on "basin-wide" groundwater levels. In fact, the data show that groundwater levels recovered after USG decreased pumping during the period 1994-1998.

26-2-3

- According to the DEIR/EIS, water levels in the Basin are expected to decline by up to 10 feet under baseline conditions (i.e., without the project) over the next 80 years, and if USG were to increase pumping to the maximum entitlement of 767 acre-feet per year, then the decline is expected to increase by an additional 20 to 23 feet. Under this scenario, the model generated a calculated total decline of about 30 feet over an 80 year period. However, it should be noted that the thickness of the aquifer in the Ocotillo area is approximately 460-500 feet. (July 2006 B-E Memo, p. 2) The expected additional drawdown is minor in relation to the overall thickness of the aquifer. The DEIR/EIS acknowledges that an additional projected 20 to 23-foot decline in groundwater level would not have an adverse impact on any special status plant or animal species because the depth to groundwater in the Ocotillo area currently ranges from about 100 to 160 feet

26-2-4

below ground surface. [DEIR/EIS, p. 3.3-76.] The DEIR/EIS also acknowledges that any impact on existing wells can be mitigated to a level of insignificance, and there is no indication that an additional 20 to 23 feet of depth to groundwater would, in any way, hinder the ability to drill new wells in the future or restore existing wells. In short, the DEIR/EIS contains no basis to conclude that an additional 20-23 foot decline in groundwater level in an aquifer that is at least 460-feet thick creates "significant" and "unavoidable" impacts.

26-2-4
Con't

- The applicable "threshold of significance" from Appendix G of the State CEQA Guidelines indicates that a lowering of the local groundwater table is deemed to be "significant" where the "production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted." In this case, there is no evidence (because none exists) that the water level would decline to a point which would no longer support existing or planned uses for which permits have been granted.
- Appendix G of the State CEQA Guidelines also indicates that a project will be deemed to have a significant impact on the environment where the project would "substantial deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume...." Here, the project will not "interfere" with recharge to the Basin and will use less than one percent of the estimated 1.2 million acre-feet of water in the Basin over an 80-year period.¹ The proposed use of 767 acre-feet of water per year is in fact quite small in comparison to other typical industrial, residential, commercial, or agricultural projects, and will not remotely come close to "depleting" local groundwater supplies. On an annual basis, even if USG pumps 767 acre-feet per year, this would represent only a tiny fraction (less than 1/10th of 1 percent) of the water in storage in a given year.
- The DEIR/EIS also overlooks the County's Groundwater Management ordinance, which independently ensures that no "basin-wide" impacts will occur.

26-2-5

26-2-6

26-2-7

2. Groundwater Quality

The DEIR/EIS states that the project will have a significant and unavoidable Basin-wide impact on water quality. The facts to support this conclusion do not exist.

- The DEIR/EIS's conclusion of Basin-wide impacts on water quality is based on the presence of TDS increases in one well in Ocotillo and one in the Yuha Estates area. Both of these wells pumped groundwater for export to Mexico in the 1970's and 1980's. The DEIR/EIS reports that TDS concentrations in the affected wells "have not recovered to their pre-pumping levels" [DEIR/EIS, p. 3.3-79.] However, as explained in the July 2006 B-E Memo, p. 1-2, the data used in the DEIR/EIS is in error. The correct data

26-3-1

¹ The California Department of Water Resources states that this Basin has 1,700,000 million acre-feet of water in storage. Bulletin 118 (1975, p. 90).

demonstrate that the pre-pumping TDS levels for the "McDougal Well" in Ocotillo (well no. 16S-9E-25K2) were actually much higher than stated in the DEIR/EIS, and that the current TDS levels in this well have nearly returned to the pre-pumping levels. The data also show that other wells, including Well 36H1 (USG Well No. 5) have shown no degradation in quality. July 2006 B-E Memo, p. 3.

26-3-1
Con't.

- As noted above, the Yuha Estates area consists predominately of older, less permeable formations. [DEIR/EIS, p. 3.3-76]. For this reason, the effect of past pumping in the Yuha Estates cannot reasonably and fairly be used as an indicator of the potential for increased TDS levels in Ocotillo.

26-3-2

- The DEIR/EIS acknowledges that there is no significant potential for saline water to migrate laterally from the area east of Coyote Wells into the Ocotillo area. [DEIR/EIS, pp. 3.3-77 through 3.3-78.] Thus, the only possible cause of degradation in water quality in the Basin as a result of increased pumping would be upward migration of saline water from the Tertiary sediments underlying the alluvial aquifer. However, the effect of any such upward migration of saline – if it occurred at all – would be highly localized, and would not effect the Basin as a whole.

26-3-3

- The DEIR/EIS states on page 3.3-80 that should water quality in the Basin decline, it is "unlikely that there will be sufficient influx of non-saline water to improve the water quality" in the Basin. However, there is no justification in the DEIR/EIS for this speculative statement.

26-3-4

- According to the DEIR/EIS, the groundwater model indicated that there is a "small potential" for upward migration of saline water. However, the DEIR/EIS also notes that there are "geologic complexities relating to fault blocks and elevated areas of Tertiary marine sediments" that limit the model's effectiveness in accurately predicting changes in water quality due to increased pumping. [DEIR/EIS, p. 3.3-80.] Since there is no other evidence that such upward migration of saline water would occur as a result of USG's proposed pumping, we submit that the potential for "basin-wide" degradation of water quality is remote and speculative and should not be deemed a significant impact of the project. [See State CEQA Guidelines, Section 15145 ("If, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact.") Moreover, as acknowledged in the DEIR/EIS, any localized impacts on water quality for individual wells can be mitigated to a level of insignificance. [DEIR/EIS, p. 3.3-79.]

26-3-5

- On page 3.3-89, the DEIR/EIS reports that the pumping that "has occurred in the Basin since the mid-1920's has not caused any measurable decrease in groundwater quality." Since the proposed pumping will be within these historic pumping levels, there is no factual or legal basis to conclude that the project in the next several decades will have significant and unavoidable "basin-wide" impacts on water quality.

26-3-6

C. The Proposed Mitigation Measures Should be Modified.

1. Mitigation Measure 3.3-1

26-4

Because the project's pumping will be within the correct "baseline" level of 767 acre-feet per year (as discussed above), proposed mitigation measure 3.3-1 is unnecessary and should be deleted. Moreover, in its current form, mitigation measure 3.3-1 is unclear, cumbersome, overly broad, and infeasible. Therefore, if the County ultimately decides to impose this measure, we request that the measure be modified as follows:

If the water level in a an existing well in the Ocotillo area decreases at a rate faster than one foot every eight years and the average water levels in the surrounding wells also decrease for more than two years in a row due to the Proposed Action, as measured from the interpolated linear of one foot every eight years with a starting reference point being the date that pumping by USG increases above the baseline rate, and there is a documented reduction in the available water to the affected user, then USG, at its election will:

1. Rehabilitate the well and/or install a new pump to restore the prior pumping rate; or
2. Provide an incremental replacement of water equivalent to the amount of the reduced rate of pumping by the affected party, of a like quantity and quality, ~~and provide reimbursement for the incremental increase for the affected party to pump the remaining available groundwater;~~ or
3. Provide a full replacement water supply to the affected party of a like kind and quality, at a cost that does not exceed the cost to the affected party at the time the impact occurred; or
4. Deepen the existing well or provide a new replacement well to the affected party, drilled to a depth that will not be affected by existing or future Project-related declines in the water table, and capable of providing an equivalent quantity and quality of water that existed prior to the impact; ~~and provide reimbursement for incremental increase in cost for the affected party to pump the available water.~~

The extent to which the Proposed Action will be considered as ~~contributing to~~ to be the cause of the decrease in water levels in the Ocotillo area will be determined only after a review of the water level data and a decision by the Imperial County Groundwater Management Committee (ICGMC).

~~The baseline condition in the Basin includes a declining water table, and existing data suggests that water levels recover slowly after significant~~

~~drawdown occurs. Therefore, if~~ USG elects to provide replacement water or a replacement water supply, arrangements must be made to provide this mitigation until groundwater levels stabilize at return to a level equal to the projected baseline condition or ten years after USG reduces its pumping from the Basin to the baseline rate, whichever first occurs.

26-4
Con't.

As stated in the DEIR/EIS on page 3.3-70, a typical Ocotillo residence using about one acre-foot per year of water would experience an increase in electrical energy of about 40 kilowatt hours (KWH) to pump water up an additional 20 feet to the surface. The current cost of electric energy in the area is about ten cents per KWH. This means that the increased cost to a typical residence would be approximately \$4 per year in the 80th year. In the 40th year, assuming an increased pumping height of approximately 10 feet, the extra cost in the 40th year would be about \$2 per year. As these figures illustrate, the increased energy usage and economic costs associated with the increased pumping are de minimis. The benefits of such minor payments to affected residents would be greatly outweighed by the cost and burdens to the County and its tax payers and USG to administer a program to determine and effectuate such payments.

2. Mitigation Measure 3.3-2

In its current form, mitigation measure 3.3-2 is unclear, cumbersome, overly broad, and infeasible. Additionally, the constituents to be assessed must be limited. We request that the measure be modified as follows:

USG will provide an alternative or replacement source of water if the water quality significantly deteriorates in any existing well in the Ocotillo area and such deterioration is caused by the Proposed Action. As discussed above, the secondary drinking water standard for TDS is 500 mg/L and water with a TDS level in excess of 1,000 mg/L is considered non-potable. Therefore, if the Proposed Action causes the TDS level in any existing well to exceeds 500 mg/L, or causes the concentration of ~~any other measured parameter~~ sulfate, chloride or boron, as described in the ~~Mitigation~~ Groundwater Monitoring Program below, to exceeds its drinking water standard that is in force at the time ~~of the measurement~~ the Proposed Action is approved, then USG will provide the affected party or parties with an alternative supply of water for drinking and cooking, at no cost to the affected party or parties. This alternative supply could be bottled water or a hookup to a replacement water source. If the TDS level in any well exceeds 1,000 mg/L and is caused by the Proposed Action, then the water quality will be such that use of the water for any domestic purpose will be significantly affected due to scale buildup, damage to plumbing, corrosion, and other similar impacts. If the TDS level exceeds 1,000 mg/L and is caused by the Proposed Action, USG will provide the affected party or parties with a hookup to a replacement supply of water. This replacement supply may be a hookup to an existing municipal district or other appropriate drinking water supply system. USG will bear the full cost of the hookup. The affected party or parties, however, would only be responsible for the annual cost of the replacement water equivalent to their costs to pump water

26-5

prior to the occurrence of the impact. If the annual cost of water for the replacement supply exceeds the affected party or parties costs to pump water prior to the occurrence of the impact, USG will pay the incremental difference. The extent to which the Proposed Action will be considered ~~as contributing to be the cause of~~ the decrease in water quality in the Ocotillo area, will be determined only after a review of the water quality data and a decision by the Imperial County Groundwater Management Committee (ICGMC).

~~The existing data from Ocotillo and Yuha Estates indicates that, once the water quality decreases, it may take many decades for the water quality to recover once the pumping causing the impact has ceased. Therefore, If USG will need is required to provide the alternative and/or replacement water supply pursuant to the terms of this mitigation measure, it must continue to do so until (1) concentrations of the above-listed constituents in excess of applicable water-quality standards return to levels below such standards or until the water quality parameters, for which there is data that currently exists, return to pre-Proposed Action levels, or (2) ten years after USG reduces its pumping from the Ocotillo/Coyote Wells Groundwater Basin to the baseline rate, whichever first occurs.~~

D. Groundwater Monitoring Program.

Table S-1 - Summary of Potential Impacts and Mitigation Measures (Summary Table) states, under the column heading "Mitigation Measures," that no mitigation measures are available with respect to "Impact 3.3-4: Water Quality Degradation at Plant Affecting the Groundwater Basin." [See DEIR/EIS, p. S-14.] However, the Summary Table then goes on to discuss USG's proposed Groundwater Monitoring Program (Program), concluding that it would not be possible to restore "basin-wide" impacts if and when such impacts are detected by the Program. This one-paragraph discussion of the Program and the alleged inability to restore basin-wide impacts is inappropriate and should be removed from the Summary Table for the following reasons:

- The Program is not a "mitigation measure." Rather, USG has voluntarily agreed to monitor groundwater quality in order to provide "early warning" of any potential adverse changes in water quality over time, even though there is no indication that the Proposed Action will cause such changes.
- As discussed above, there is no evidence to support a conclusion that the Proposed Action will cause "basin-wide" impacts on groundwater quality. Moreover, even if there was evidence that the Proposed Action would cause "basin-wide" impacts, the discussion of such an impact does not belong in the Summary Table, which should simply identify the potential impact (which was already done in the first column) and identify feasible mitigation measures. If there are no feasible mitigation measures (or if none are necessary), the Summary Table should simply state that fact.

26-5
Con't.

26-6

II. Alternatives

The DEIR/EIS describes various alternatives to the Proposed Action, including the "Partial IID Water Supply Alternative" and the "Full IID Water Supply Alternative." The "Full IID Water Supply Alternative" is infeasible for the following reasons:

To implement the Full IID Alternative would require, among other things:

- construction of a larger water storage facilities (for at least 7 days of water storage),
- settling ponds to clear the water of suspended solids,
- a desalinization plant with associated evaporation ponds for brine removal (20 acres),
- wastewater handling facilities to process concentrated salty water,
- a water treatment facility to produce potable water for Plant personnel.

These facilities would result in the disturbance of up to an additional thirty acres of land, require additional speculative permitting and the costs would be prohibitive. This Alternative also would require the use of about 25% more canal water to account for water evaporation during the desalinization and evaporation processes. Additionally, from a technical perspective, fluctuating salinity of canal water over time presents a technical hurdle that USG does not believe it can feasibly (practically and cost effectively) overcome and still manufacture quality product. The issue of fluctuating salinity is reduced in the partial IID Alternative.

26-7

USG is currently exploring the possibility of obtaining IID water to supplement its existing water supply in Ocotillo. USG's preliminary investigation indicates that the construction of a pipeline to the Westside Main Canal and use of IID water to serve a *portion* of USG's water needs is *potentially* feasible. However, there are many unknowns. Among other things, numerous technical, engineering, economic, and legal issues would still need be resolved. Additionally, the process of obtaining IID water and the necessary right-of-way for the water pipeline will require approvals from multiple governmental agencies, which will take a considerable amount of time. And of course, there is no assurance that such approvals will be granted.

Although USG will continue to aggressively explore the feasibility of obtaining IID water for a portion of its water needs, we do not anticipate that we will be in a position to know whether this alternative is feasible for at least 1-2 years and it would potentially be 2-3 years (or more) beyond that before the Westside Main Canal water could be piped to Plaster City. Because the feasibility of the "Partial IID Water Supply Alternative" is unknown at this time and will not be known prior to the County's decision on the Proposed Action, this alternative should be rejected as infeasible because its implementation is remote and speculative.

III. Inert Materials Storage Area

The DEIR/EIS discusses the status and proposed disposition of the Inert Materials Storage Area (IMSA), which was identified in the scoping process as an "area of controversy." Although the information contained in the DEIR/EIS regarding the IMSA is generally accurate, it is

26-8

incomplete inasmuch as it does not describe the USG activities over the last 12-18 months which have resulted in a significant reduction in the size and visibility of the IMSA.

26-8
Con't.

Specifically, the Plant stores off-specification gypsum wallboard south of the Plant. The Plant reclaims off-specification wallboard into the manufacturing process and reincorporates it into finished, saleable product. Over 150,000 tons of off-specification wallboard was reclaimed in 2005. The Plant typically recycles 6,000-7,000 tons of this off-specification material per month. The storage area is now graded to blend in with the surrounding land contours and is watered to reduce dust. (See Exhibit C, IMSA photos.) The first three photos in Exhibit C are taken from essentially the same location as photos 2,3 and 4 in DEIR/EIS Appendix F (pages 16-17) to show a comparison of the area from 2004 to July 2006. The July 2006 photos show a much reduced IMSA. The final photo in Exhibit C is a current, closer view of the IMSA. As the photos depict, these recycling efforts have substantially reduced or negated the potential adverse impact of the IMSA on visual resources.

IV. Miscellaneous Comments

Below we detail additional comments which should be addressed in the final EIR/EIS.

- In the first full paragraph on page 1.0-17, the DEIR/EIS states that the Plant is located 26 miles southwest of the Quarry. "Southwest" should be changed to "Southeast." 26-9
- On page 3.3-1, the page references in the bullets are not correct. "3.3.4 Quarry Water Usage" starts on page 3.3-94. "3.3.5 Quarry Water Usage: Standards of Significance..." starts on page 3.3-99. 26-10
- In various places the DEIR/EIS uses the term "Tertiary marine sediments." However, some of the tertiary sediments at issue here are terrestrial, not marine. This phrase should be changed to "Tertiary sediments." 26-11
- Figure 3.3-7 (page 3.3-23) is entitled "TDS/Concentration," and the source of the data is identified as Bookman Edmonston (1996). However, Figure 3.3-7 actually reflects data contained in Figure 5-10 of Bookman Edmonston (2004), which shows groundwater elevations in 2002. A copy of Figure 5-10 from Bookman Edmonston (1996), which contains the intended data, is attached to the July 2006 B-E Memo (Exhibit B). 26-12
- Table 3.3-3B (page 3.3-25) shows TDS data for various wells in the Basin over time. However, as explained above and in the July 2006 B-E Memo, the data for well 25K2 for 1972 and 1974 is erroneous, and should be changed to 325 mg/L and 320 mg/L, respectively. 26-13
- Figure 3.3-12 (DEIR/EIS page 3.3-57) is a graph of the TDS data for various wells in the Basin. The data points for well 25K2 are erroneous and should be modified to reflect the changes noted above. 26-14

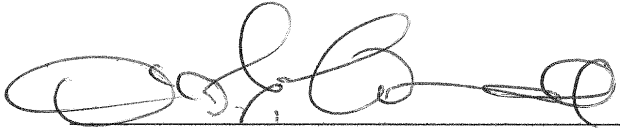
- On page 3.3-79 of the DEIR/EIS, the second paragraph under the heading "Level of Significance After Mitigation" should be deleted. This one-sentence paragraph, which addresses the "long-term" affects to "basin-wide groundwater," has been inadvertently included in the discussion of Impact 3.3-3, which addresses potential impacts on individual wells. A discussion of the potential "basin-wide" impacts on groundwater is included in the next section (Impact 3.3-4). 26-15
- On page 3.3-80, the DEIR/EIS states, with respect to "Impact 3.3-4: Water Quality Degradation at Plant Affecting the Groundwater Basin," that the Level of Significance Before Mitigation is "Significant" and that no mitigation measures are available. These statements are followed by a one-paragraph discussion of USG's proposed Groundwater Monitoring Program (Program), concluding that it would not be possible to restore "basin-wide" impacts if and when such impacts are detected by the Program. In the document, this paragraph is italicized, which is used elsewhere in the DEIR/EIS to identify mitigation measures. As explained above, the Program is not a "mitigation measure." In order to avoid any confusion in this regard, the italics should be removed. Also, on page 3.3-81, the statement that the Level of Significance After Mitigation" is "Significant" is redundant (the same statement appears on page 3.3.-80) and should be deleted. 26-16
- On page 3.3-90, Impact 3.3-1: Water Depletion at Plant Affecting Individual Well Owners should read, "*Increased pumping of USG wells could reduce water levels, increasing the cost of pumping groundwater, causing some wells to go dry, and reducing the amount of available water in the Basin.*" This change should be carried over to all Impact 3.3-1 discussions. 26-17
- On pages 3.4-31 and 3.4-32, the DEIR/EIS refers to "Mitigation Measure 3.4-1a." These references should be changed to Mitigation Measure 3.4-1. 26-18
- Photographs 5 and 6 in Figure 3.4-4 are the same photograph. 26-19
- In the first full paragraph on page 3.4-17, the reference to "Figure 3.5-3" should be changed to "Figure 3.4-1." 26-20
- On page 3.5-35, the reference to "Fat Pat Well" in Figure 3.5-4 should be changed to "Quarry Well No. 3." 26-21
- The data for air pollutant concentrations shown in Table 3.6-1 on page 3.6-3 is from 2003. This table should be updated with 2005 data, including data for PM_{2.5} which we understand is now available. 26-22
- On page 3.6-5, include PM_{2.5} and reference CARB, 2006. 26-23
- Update Table 3.6-2 on page 3.6-6 and reference CARB, 2006. 26-24

- Update Table 3.6-3 on page 3.6-9 to include PM_{2.5} and reference CARB, 2006. | 26-25
- Update the last paragraph on page 3.6-10 and reference CARB, 2006. | 26-26
- Regarding Table 3.6-5 on page 3.6-13, note that ICAPCD Rule 800 was revised in November 2005. | 26-27

CONCLUSION

USG appreciates this opportunity to comment on the DEIR/EIS and looks forward to working with the County, other agencies, and interested members of the public during the upcoming hearing process.

Sincerely,



David G. Wonnell
Director, Environmental & Manufacturing Services

cc: Linda Self, BLM (with Exhibits)

Exhibits

- A. March 8, 2006 letter from Imperial County to Matt Huss regarding Registration of Wells and Pipeline.
- B. July 11, 2006 memorandum from Bookman-Edmonston to David Wonnell and Malcolm Weiss.
- C. IMSA photos from July 2006.



IMPERIAL COUNTY

PLANNING & DEVELOPMENT SERVICES

PLANNING / BUILDING INSPECTION / ECONOMIC DEVELOPMENT / PLANNING COMMISSION / A.L.U.C.

JURG HEUBERGER, AICP, CEP, CBO
PLANNING & DEVELOPMENT SERVICES DIRECTOR

March 8, 2006

United States Gypsum Company (USG)
Attention: Mr. Huss, Plant Manager
P.O. Box 2450
El Centro, CA 92243

RECEIVED
2006 MAR 13 P 1:16
OFFICE OF THE COUNTY COUNSEL
COUNTY OF IMPERIAL

Re: Registration of wells and water pipeline per Imperial County Groundwater Ordinance Sections 92103 & 92204

APN: 033-380-44-01 & 033-380-47-01

Mr. Huss:

On March 14, 2005, USG submitted to the Planning & Development Services Department four forms to register for "historical county uses": three for the existing water wells used to extract groundwater and one for the waterline used to transport water to the Plaster City plant. After reviewing these registration forms and all the evidence before it, the Planning & Development Services Director has approved the historic county use registration for the three wells and the pipeline, subject to the attached terms.

In the event USG increases the water extraction above the 767 acre-feet per year limit for these three water wells, an application for a Conditional Use Permit with approval by the Planning Commission and/or Board of Supervisors is necessary.

If you have any questions regarding this matter, please feel free to contact me at (760) 482-4236 extension 4310 or by e-mail jurgheuberger@imperialcounty.net.

Sincerely,


JURG HEUBERGER, AICP, CEP
Planning & Development Services Director

Attachments:

A: Terms

CC: County Counsel
Darrell Gardner, Assistant Planning & Development Services Director
File 10.105, 10.101, 10.102, 10.110, 10.130
File 033-380-47-01, 033-380-44-01

SPECIFIC TERMS FOR GROUND WATER WELL REGISTRATION

APN: 033-380-44-01 & 033-380-47-01 for water wells & water pipeline

T-1 Any new well or existing well that is not under an Imperial County conditional use permit shall be registered with Planning & Development Services Department and the state pursuant to California Water Code Section 13751. **(Pursuant to Title 9, Division 21: Registration of Well Section 92103.00)**

T-2 Registration of 767 acre-feet (AC FT) of groundwater per year is the maximum amount of groundwater extraction & exportation allowed for the combined wells #16S/9E-36C1, 16S/9E-36C2, 16S/9E-36C3; (684,733 gallons per day/4,806,302 per week; based on 7 days per week/ 52 weeks per year calculation).

T-3 A flow meter shall be installed and sealed by a California state licensed water well drilling contractor. USG shall submit an annual report to the Department indicating the calendar year amount of water extracted from the wells. A photograph (dated and signed) of the flow meter readings shall be included in the annual report. The report shall be received by January 15 of each year following the issuance of this registration. In the event of a flow meter failure, USG shall immediately notify the Department, but not be required to cease the water well operation, **so long as the main plant water flow meter remains in operation.** USG shall fix or replace any flow meter that fails within 2 weeks. USG may be allowed to temporarily substitute the flow meter for an alternative measuring device, at the approval of the Department. In this case two (2) separate reports shall be submitted as stipulated herein. **(Pursuant to Title 9, Division 22: Groundwater Ordinance 92202.04 Extraction Facility Water Flow Measurements)**

T-4 Should a water well be "abandoned" at any time, USG shall seal/cap the well according to standards set by the state and in a manner acceptable to the County Building Official. "Abandoned" for purposes of this registration:

"Means the cessation or suspension of use of a facility for more than twelve (12) consecutive months, or such longer period of not more than twenty-four consecutive months as the director may approve in writing." USG may have a well deemed inactive by filing a written notice with the Department stating its intentions to use the well under specific conditions or time frames. Any well that is open or whose services/operating equipment (e.g. pumps/motors/pipes etc.) has been removed shall be deemed abandoned. In all instances of abandonment, USG shall comply with the state and local laws governing well closures and deactivation.

T-5 Any abandoned well shall be destroyed according to state standards and in a manner acceptable to the county building official. A copy of the well driller's report by a California state licensed water well drilling contractor shall be sent to the Department of Public Works and the Department within thirty days following the destruction of the water well.

T-6 An encroachment permit shall be secured from the Department of Public Works for any and all new or altered driveways to access the property.

T-7 The County reserves the right to enter the premises to make the appropriate inspections and to determine compliance with the terms of this registration. Access to authorized enforcement agency personnel shall not be denied.

T-8 Registered owner of wells # 16S/9E-36C1, 16S/9E-36C2, 16S/9E-36C3, shall defend, indemnify and hold harmless County and its agents, including consultants, officers and employees from any claim, action or proceeding against the County or its agents, including consultants, officers or employees to attack, set aside, void, or annul the registration of these wells and the accompanying pipeline. This indemnification obligation shall include, but not be limited to, damages, costs, expenses, attorney's fees, or expert witness costs that may be asserted by any person or entity, including any claim for private attorney general fees claimed by or awarded to any party from the County.

T-9 In the event of a dispute the meaning(s) or the intent of any word(s), phrase(s) and/or conditions or sections herein shall be determined by the Planning Commission of the County of Imperial. Its determination shall be final unless an appeal is made to the Board of Supervisors within ten (10) days from the date of the Commission's decision.

T-10 Should any condition(s) of this registration be determined by a Court or other agency with property jurisdiction to be invalid for any reason, such determination shall not invalidate the remaining provision(s) of this registration.

T-11 A registered "historic county well user" may increase extraction of existing, registered wells only by applying for and receiving a discretionary conditional use permit from the County of Imperial.

JHDB/JM/DB/R:/APN/033/380/44&47/WATERWELLREGISTRATIONFINAL

MEMORANDUM

Geotechnical
Environmental and
Water Resources
Engineering

DATE: July 11, 2006
TO: David Wonnell and Malcolm Weiss
FROM: Dick Rhone, Ron Schnabel
SUBJECT: Review of Draft EIR/EIS on US Gypsum Expansion/ Modernization Project

We have reviewed the Draft EIR/EIS (DEIR) on the US Gypsum Expansion/ Modernization Project dated April 2006. There are a number of items in the hydrologic section of the DEIR that are in error and bear comments. Much of the analysis and conclusions in the DEIR are based on work performed and studies written by Bookman-Edmonston (B-E). Below, this memorandum discusses both water quality and water quantity.

Salinity at Well 16S-9E-25K2

The DEIR draws important and substantive conclusions based on erroneous data concerning reported changes in TDS (Total Dissolved Solids or salinity) at the McDougal Well (16S-9E-25K2). This well was heavily pumped from 1974 to 1981. The DEIR reports that the TDS of this well prior to pumping was approximately 250 mg/L to 310 mg/L. The DEIR further states that within a few years of pumping, the TDS was as high as 400 mg/l, a 60% increase. It further states that salinity has returned to between 320 mg/L and 360 mg/L.

A review of United States Geological Survey (USGS) data (included in the DEIR appendix) shows that two samples from this well, taken in 1972 and 1974, reported TDS concentrations of 253 and 245 mg/L, respectively. These are under a column heading labeled "Solids, Sum of Constituents, Dissolved". At the same time, this data showed that TDS measured by evaporation were 325 and 320 mg/L, respectively. A further review of the USGS data shows that the values of 253 and 245 mg/L were obtained by measuring the individual constituents and summing the results. Normally the TDS determined by these two methods are relatively close. The difference between the two sets of data, however, is largely because silica was not measured and reported in the first data set. Subsequent measurements in the USGS data show close agreement between the two methods when silica measurements were included. Figure 1 shows the historical TDS of Well 25K2 from the USGS database when accurately reported by summation and evaporation techniques.

Thus, when correct data are used, contrary to the conclusions in the DEIR, the following conclusion is accurate. Well 16S/9E-25K2 was pumped for export of water to Mexico

26-28

from 1974 to 1984. As indicated in DEIR Table 3.3-4 and in Figure 3.3-8, water production from this well increased from 138 AF/yr in 1974 to 222 AF/yr in 1977, and then is presumed to have decreased to 137 AF/yr for 1978 to 1984. Actual production data after 1978, however, is uncertain. Prior to pumping this well, TDS levels were approximately 320 mg/L. Within a few years after pumping began, the TDS concentration increased to as high as 400 mg/L, which is a 25 percent increase from pre-pumping levels. Importantly, TDS levels subsequently decreased to between 320 mg/L to 360 mg/L. As shown in Figure 3.3-12, TDS Trends Ocotillo/Nomirage Area, the TDS concentrations in well 25K2 have essentially returned to the levels measured prior to pumping. Other wells, including Well 36H1 (USG Well No. 5), have similarly shown no degradation in water quality.

26-28
Con't.

When using the correct data, conclusions in the DEIR reporting degraded water quality after pumping are not supported.

Water Levels at Well 16S/9E-25K2

On DEIR page 3.3-46, it notes that pumping of well 25K2 caused water levels to drop 50 to 60 feet between 1975 and 1981. The DEIR, however, fails to note that the water levels from 1984 to 1996 in this well returned to essentially pre-pumping levels. See DEIR Figure 3.3-9. While the data in Figure 3.3-9 for well 25K2 indicates measurements were likely taken during times the well was in operation, the data also clearly shows that when pumping ceased, water levels recovered.

26-29

Figure 3.3-7 TDS Concentration in mg/L

Figure 3.3-7 is titled TDS Concentration. The data is noted as coming from B-E (1996) where it appears that the intent was to use Figure 5-10 from the 1996 B-E report. Unfortunately, in the DEIR Figure 5-10, from the B-E (2004) report was used which shows groundwater elevations in 2002. Attached is a copy of Figure 5-10 B-E (1996) report, reduced to 8 ½ x 11.

26-30

Above Average Precipitation

The text states in several places that above average precipitation occurred over the last several years and the DEIR notes that the effect of this has not been seen in groundwater levels. However, the recharge area to the Ocotillo aquifer is ten miles from the wells described as not noticing groundwater level increases. Additionally, the stratigraphic thickness of the aquifer in the Ocotillo area is approximately 460-500 feet, and the Basin is estimated to contain 1.2 million acre-feet at water. Further, as stated in the DEIR, the groundwater moves very slowly (inch per year). As such, it is not expected that increased rainfall for even a twenty-year period would affect water levels at these wells until after many decades or centuries. We further note that an extremely high annual rainfall amount occurred in 1982. The fact that groundwater levels did not show any response to this event

26-31

indicates that there is virtually no deep percolation of rainfall in Ocotillo, and that recharge occurs at the base of the mountains.

26-31
Con't.

Water Quality of Water in Yuha Estates Area

DEIR Figure 3.3-13 show increasing salinity at the McDougal well 11H2 for the period 1972 through 1979 when pumping at the well occurred. During this period, salinity increased from about 340 mg/L to 390 mg/L. Since the pumping ceased, no water quality samples have been taken at this well. Figure 3.3-13, also shows salinity in two nearby wells, 11H2 and 11H3. Well 11H2 had four samples in about 1984 which were in the 295 mg/L range. These were after the McDougal well had pumped and this well showed good quality water. Well 11H3 was sampled from 1986 to 2002. This well also showed good quality water, and even indicating a slight improving trend.

26-32

The water quality data indicates that the pumping by McDougal caused an increase in salinity at that well. No data indicates other wells in the area were impacted. Also, the DEIR states that the Yuha area contains predominantly older, less permeable formations than in the Ocotillo area. So drawing conclusions, as the DEIR does, based on the pumping in the Yuha area to pumping in Ocotillo is inappropriate and yields inaccurate conclusions.

Water Quality Changes at US Gypsum Wells

The groundwater production at the three USG wells has exceeded annual production at both of the McDougal wells. Further, the USG pumping has continued for a number of decades. The USGS salinity data for well 36H1 (USG No. 5) is shown in Figure 3.3-12 of the DEIR. The data shows that the salinity is essentially unchanged since data was first available in 1962. The appropriate conclusion to draw is that even with the substantial USG pumping over decades, groundwater quality in the Ocotillo area has not been adversely impacted.

26-33

The DEIR should recognize that larger diameter and deeper wells (USG's) exist and that those wells have long pumping histories. Nonetheless, those wells have not experienced declining water quality.

Recognizing these facts, along with the DEIR's reliance on erroneous data at well 16S/9E-25 K2 (the erroneous data reports higher TDS data is actually the case) makes clear that the DEIR paints an inaccurate picture and the effects of pumping in the Ocotillo/Coyote Wells Groundwater Basin.

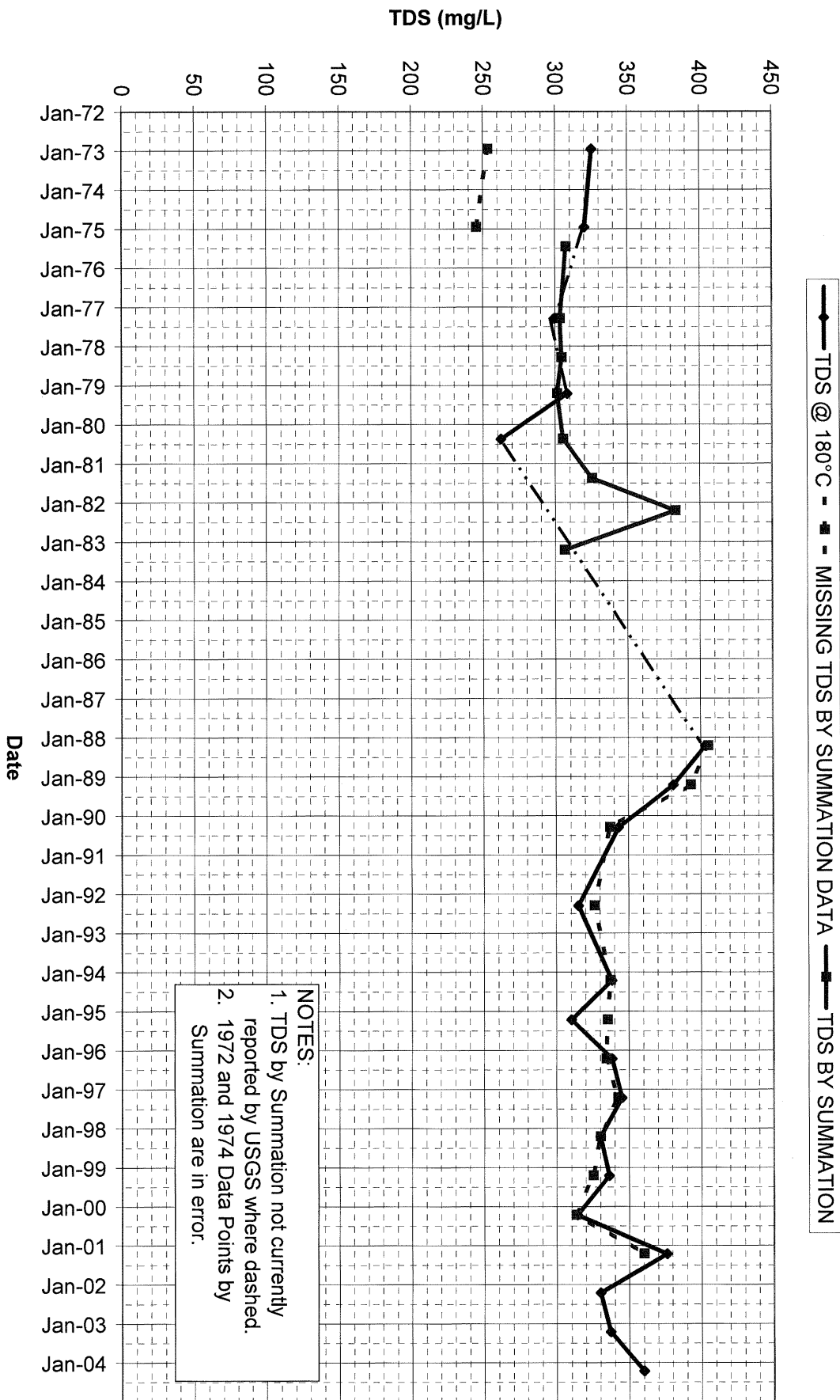
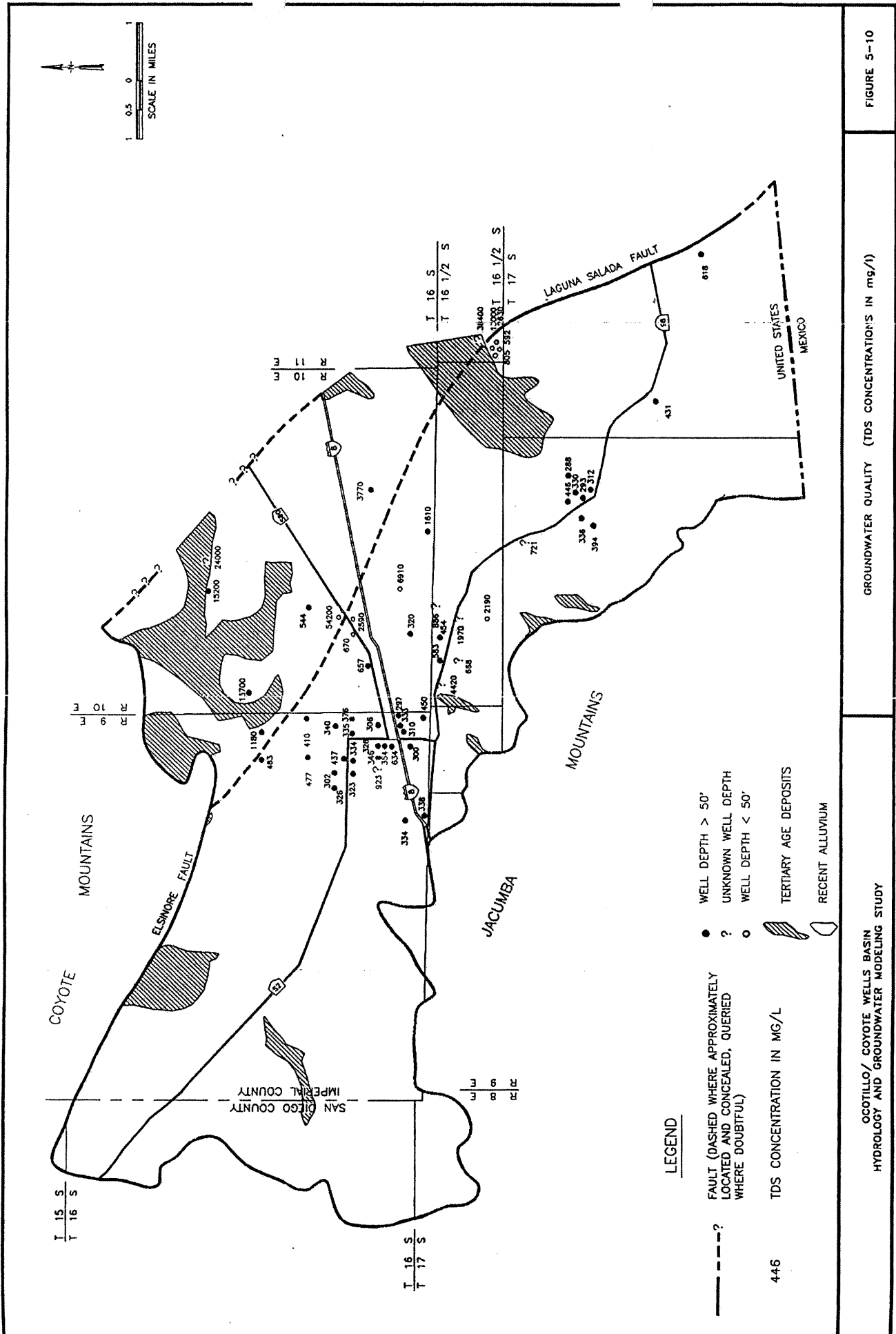
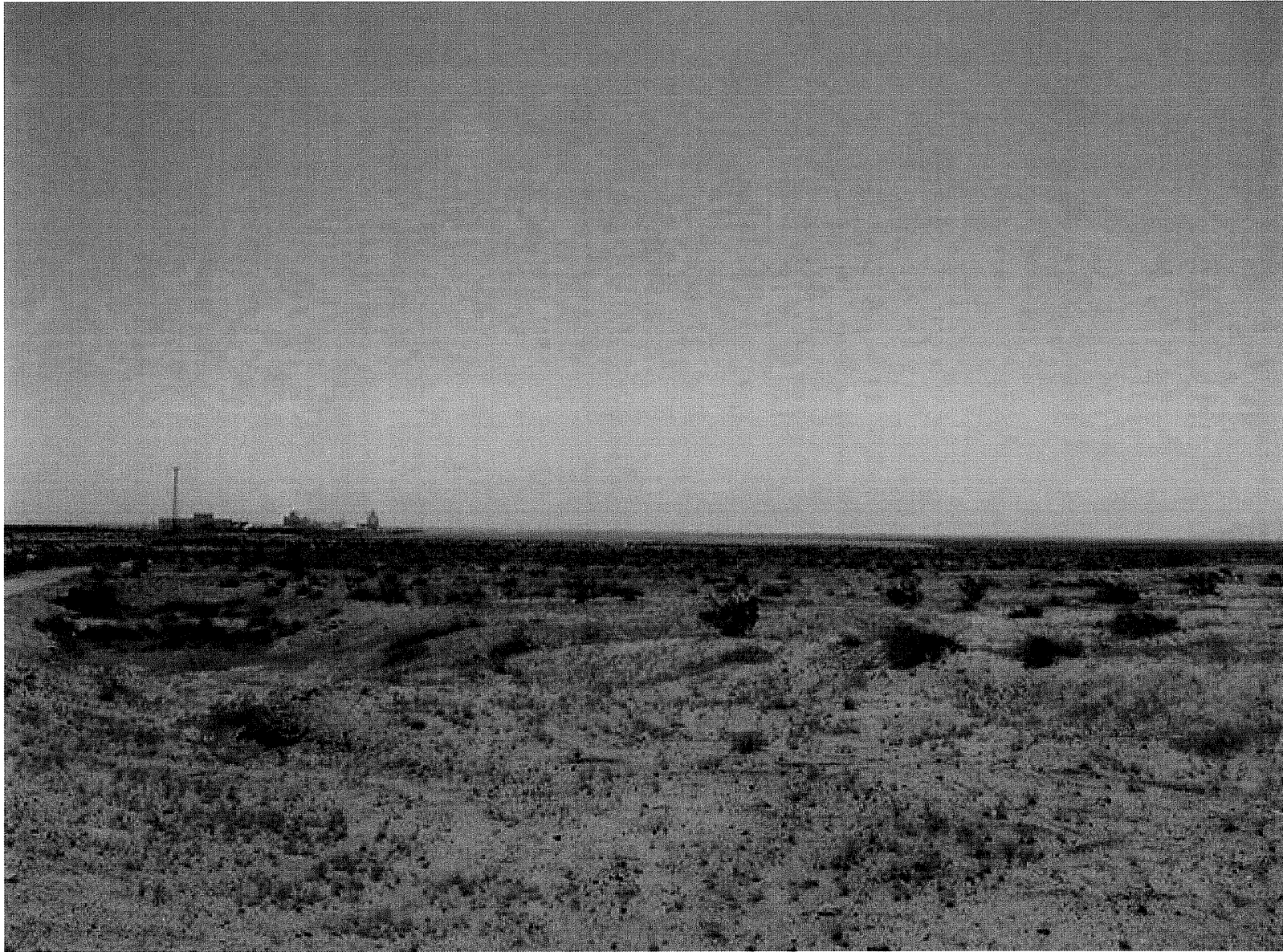
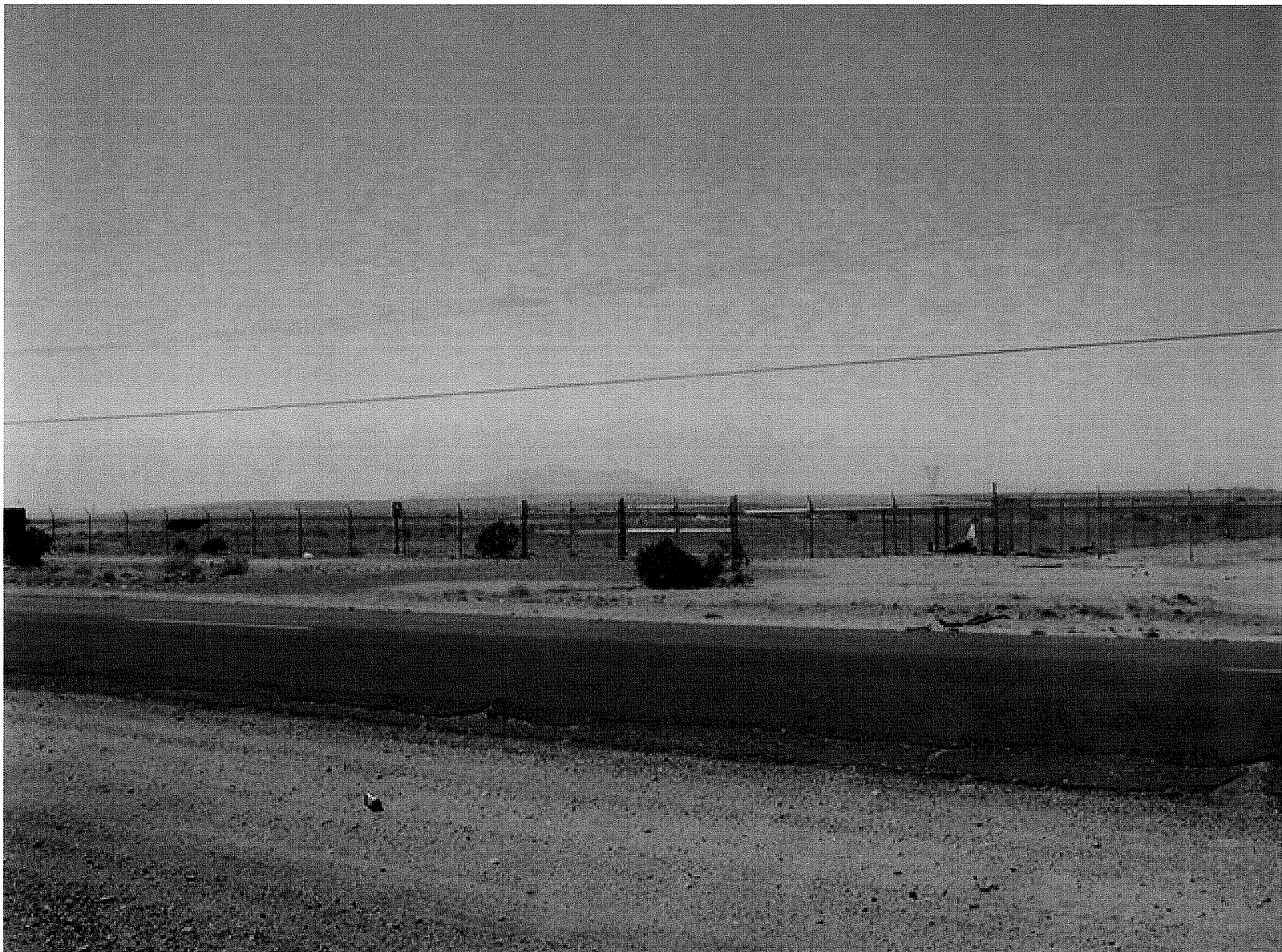


Figure 1
TDS in Well 16S/9E-25K2











Letter 26
U.S. Gypsum, July 14, 2006

Comment 26-1:

Response: The commenter presents arguments that the baseline conditions for USG pumping should be identified as 767 acre-feet per year, in which case the Proposed Action would have no potential adverse effects on groundwater resources. However, in order to present a conservative analysis of the potential impacts on groundwater resources, the Draft EIR/EIS assumes a baseline water usage of 347 acre-feet per year, which represents the average water production for the period from 1994 through 1998. This is reasonable given the recent range of 327 to 521 acre-feet per year over 1982 to 1998.

See also General Responses 4.3.4 and 4.3.5.

Comment 26-2:

Response: See Response to Comment 26-1. As noted by the commenter, the Draft EIR/EIS states, on page 2.0-17, that water usage at the Plant was approximately 400 acre-feet per year. However, as indicated in Table 3.3-4 of the Draft EIR/EIS, the actual measured water production in 1998 was 333 acre feet. Therefore, the paragraph beginning at the bottom of page 2.0-17 of the Draft EIR/EIS has been replaced with the following text:

Water for the Plant including production water, potable water and water for sanitary uses has been supplied by three wells located near Ocotillo, California approximately 8.5 miles west of the Plant site. An 8-inch diameter gravity-feed pipelines transported the water to the Plant. In 1998, water usage at the Plant was approximately 333 acre-feet per year (AF/Yr). Historically, water usage had been higher, however, USG was able to reduce its water use by implementing water conservation measures to ensure that (1) there is no process water discharge from the operation except for some steam, and (2) water is no longer discharged for cooling production equipment. These conservation measures, instituted in the 1980s and 1990s, have reduced water usage from the recorded high of 767 AF/Yr to the 1998 value. From 1981 through 1998, the average water usage at the Plant was approximately 420 AF/Yr.

The comment asserts that the project will not have a significant and unavoidable basin-wide impact on groundwater. See Response to Comment 26-2-1.

Comment 26-2-1:

Response: Comment noted. While the Draft EIR/EIS draws parallels between the proposed increase in USG pumping near Ocotillo and the historical pumping near Yuha Estates and export to Mexico, the Draft EIR/EIS also notes the significant differences in hydrogeologic conditions between the two areas. The finding of a significant and unavoidable impact on the Basin does not necessarily indicate that USG pumping will have impacts like those that occurred near Yuha Estates or that the direct impacts will necessarily be Basin-wide. Rather, the finding acknowledges overdraft, (which is defined on a Basin-wide basis) the fact that increased pumping would increase overdraft. Overdraft is evidenced in the Ocotillo-Coyote Wells Groundwater Basin by declining groundwater levels and is indicated in previous water balance studies, all of which present a decrease change in storage over the past 30 years (see General Response 4.3.7). The decline in storage is small relative to the overall storage in the Basin; nonetheless, the decline in storage itself is an adverse impact, representing sustained depletion of a shared resource.

Comment 26-2-2:

Response: Comment noted; groundwater level monitoring across the Basin does not show noticeable responses to wet years.

Comment 26-2-3:

Response: Comment noted. The experience in Yuha Estates is the only other case of substantial and sustained pumping in the Basin, and has been cited repeatedly in discussions of potential impacts of USG pumping in Ocotillo. It is advisable that inferences not be drawn from Yuha Estates to Ocotillo because hydrogeologic conditions differ significantly between Yuha Estates and Ocotillo. See Response to Comment 26-2-1, General Response 4.3.6, Hydrogeology and Groundwater.

Comment 26-2-4:

Response: See Response to Comment 26-2-1.

Comment 26-2-5:

Response: See Response to Comment 26-2-1.

Comment 26-2-6:

Response: The comment correctly asserts that the Project impact on groundwater supply would be small and represents only a tiny fraction of the existing groundwater storage. This impact, however, must be viewed in the context of overdraft as

indicated by long-term declining groundwater levels and storage and potential water quality degradation.

Comment 26-2-7:

Response: See General Response 4.3.5.

Comment 26-3-1:

Response: Comment noted. The finding of a significant impact on the Basin is not limited to data from one well in Ocotillo and one well in Yuha Estates; see General Response 4.3.6 regarding potential water quality impacts. Also see Responses to Comments 26-2-3 and 26-3-3.

Comment 26-3-2:

Response: Comment noted with agreement.

Comment 26-3-3:

Response: See Response to Comment 26-2-1. The finding of a significant and unavoidable impact on the Basin does not necessarily indicate that USG pumping will have direct Basin-wide impacts. Rather, the finding acknowledges overdraft—which is defined on a Basin-wide basis—and the fact that increased pumping would increase overdraft for the next 80 years. While overdraft-related degradation of water quality has not been documented, groundwater levels have declined for decades. As discussed in General Response 4.3.6, sustained groundwater level declines in the Ocotillo area could reasonably result in water quality deterioration.

Comment 26-3-4:

Response: The Draft EIR/EIS states that the amount of Basin recharge is less than the amount of Basin discharge and accordingly, that if water quality deterioration occurs, then it is unlikely that there would be sufficient influx of non-saline water to improve water quality. As clarification to the Draft EIR/EIS text, if pumping results in water quality deterioration and continues unabated, then there is no reason to anticipate water quality improvement unless the pumping is reduced or discontinued, at which time water quality should improve, all other things remaining equal.

Comment 26-3-5:

Response: See General Response 4.3.6.

Comment 26-3-6:

Response: The pumping that has occurred since the 1920's has not resulted in measurable water quality deterioration. However, pumping has resulted in demonstrable water level and storage declines. As discussed in Response to Comment 26-2-1 and General Response 4.3.6, the continuing declines present a potential for future water quality deterioration.

Comment 26-4:

Response: The commenter states that Mitigation Measure 3.3-1 is unnecessary and should be deleted because the proposed pumping will be less than 767 acre-feet per year. In this regard, see General Responses 4.3.6 and 4.3.7.

The commenter is correct that Mitigation Measure 3.3-1 is overly broad and unclear in certain respects. Specifically, the potential cost of increased energy usage to individual well owners is de minimis and does not itself constitute a significant effect on the environment. See CEQA Guidelines § 1532. Also, as proposed in the Draft EIR/EIS, Mitigation Measure 3.3-1 includes language that is confusing and unnecessary. For these reasons, Mitigation Measure 3.3-1 has been revised consistent with the commenter's suggestion as indicated on page 3.3-71 in Appendix A of the Final EIR/EIS.

Comment 26-5:

Response: The commenter is correct that Mitigation Measure 3.3-2 is overly broad and unclear in certain respects. Among other things, the constituents to be assessed must be clearly identified. Moreover, without accurate historical analytical data concerning any number of possibly measured parameters or substances of concern, it serves little or no purpose to run a host of water quality tests. TDS, sulfate, chloride, and boron are sufficient indicators of water quality in this area. Should water quality decline to specified levels, alternative clean water will be provided at no cost to the individual well owners. For these reasons, Mitigation Measure 3.3-2 has been revised consistent with the commenter's suggestion as indicated on page 3.3-78 in Appendix A of the Final EIR/EIS.

Comment 26-6:

Response: Comment noted. As indicated in Appendix A on Table S-1 pages S-9 through S-29 of the Final EIR/EIS, the Summary Table has been revised to reflect that the monitoring program is part of the proposed Project and not a mitigation measure. The Summary Table for Impact 3.3-4 has been changed to indicate "None Available" for Mitigation Measures. See also General Response 4.3.6 and HWQ-4 for discussion of impacts to the Basin.

Comment 26-7:

Response: Comment noted. The feasibility of alternatives to the Proposed Action will be addressed by the decision-makers. See also General Response 4.3.4.

Comment 26-8:

Response: Comment noted.

Comment 26-9:

Response: Comment noted. The correction has been made on page 1.0-17 of the Draft EIR/EIS.

Comment 26-10:

Response: Comment noted. The correction has been made on page 3.3-1 of the Draft EIR/EIS.

Comment 26-11:

Response: Comment noted. The correction has been made.

Comment 26-12:

Response: Comment noted. Figure 3.3-7 in the Draft EIR/EIS is incorrect. A corrected Figure 3.3-7 appears in Appendix A of the Final EIR/EIS.

Comment 26-13:

Response: Comment noted. Table 3.3-3B on page 3.3-25 of the Draft EIR/EIS has been revised.

Comment 26-14:

Response: Comment noted. Figure 3.3-12 has been revised.

Comment 26-15:

Response: Comment noted with agreement. The referenced sentence was inadvertently included in this section and has been deleted on page 3.3-79 of the Draft EIR/EIS.

Comment 26-16:

Response: See Response to Comment 26-6.

Comment 26-17:

Response: Comment noted with agreement. The discussion of Impact 3.3-1 is limited to the potential impact on individual wells. Potential impacts on the amount of available water in the Basin are addressed under Impact 3.3-2. Accordingly, references to the potential for “reducing the amount of available water in the Basin” have been deleted from the discussion of Impact 3.3-1 on page 3.3-90 of the Draft EIR/EIS.

Comment 26-18:

Response: Comment noted. All references to “Mitigation Measure 3.4-1a” have been changed to “Mitigation Measure 3.4-1” on page 3.4-31 in Appendix A of the Final EIR/EIS.

Comment 26-19:

Response: Comment noted. Photo 6, Figure 3.4-4 is incorrect. The correct photograph appears in the quarry biological survey report, Appendix 2, page 25 of the Reclamation Plan. Correction made.

Comment 26-20:

Response: Comment noted, correction made on page 3.4-17 in Appendix A of the Final EIR/EIS.

Comment 26-21:

Response: Comment noted, correction made to Figure 3.5-4. Quarry Well No. 3 and Fat Pat Well are the same well.

Comment 26-22:

Response: Comments noted. Also see General Response 4.3.10.

Comment 26-23:

Response: Comment noted, see Response to Comment 26-22. See also General Response 4.3.10.

Comment 26-24:

Response: Comment noted. See General Response 4.3.10.

Comment 26-25:

Response: Comment noted. See General Response 4.3.10.

Comment 26-26:

Response: Comment noted. See General Response 4.3.10.

Comment 26-27:

Response: Comment noted. See General Response 4.3.10.

Comment 26-28:

Response: Comment noted with agreement. A corrected Table 3.3-3B and Figure 3.3-12 is included. See Responses to Comments 26-13 and 26-14.

Comment 26-29:

Response: Comment noted with agreement. Water levels in Well 25K2 are variable, likely reflecting pumping. See General Response 4.3.6 for discussion of this well's pumping and water level history. The following sentence has been added to the end of the referenced paragraph: "From 1984 to 1996, water levels in this well have returned to pre-pumping levels."

Comment 26-30:

Response: Comment noted. Figure 3.3-7 in the Draft EIR/EIS is incorrect. A correct Figure 3.3-7 is attached. Also see Responses to Comments 26-12, 27-17, and 29-110.

Comment 26-31:

Response: Comment noted with agreement. The Draft EIR/EIS repeatedly looked for a relationship between precipitation (recharge) events and groundwater levels (for example, water level recovery following high rainfall events) but also repeatedly commented on the lack of correlation. Refer to General Response 4.3.6 for discussion of recharge and groundwater levels.

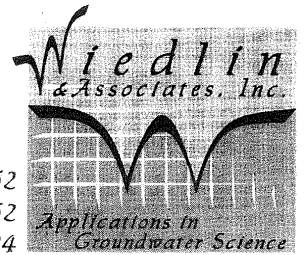
Comment 26-32:

Response: Comment noted. The experience near Yuha Estates is the only other instance of substantial and sustained pumping in the Basin and thereby warrants discussion. However, as indicated in the Draft EIR/EIS, it is not necessarily predictive of potential impacts from USG pumping in Ocotillo because of the

different hydrogeologic conditions. For discussion of potential impacts on Basin water quality, see General Response 4.3.6.

Comment 26-33:

Response: The Draft EIR/EIS recognizes the Basin has not experienced declining groundwater quality. Figure 3.3-12 of the Draft EIR/EIS shows TDS trends in wells including USG Well No. 5 (36H1); these wells indicate no historical water quality deterioration from the 1960s to recent. For discussion of potential impacts on Basin water quality, see General Response 4.3.6.



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858.259.6732 · fax 858. 259.6094

Imperial County Planning & Development Service
Attention: Jurg Heuberger
801 Main St.
El Centro, CA 92243

July 15, 2006

Subject: Technical Review of Groundwater Issues and Analyses; United States Gypsum Company Expansion/Modernization Project

Dear Mr. Heuberger:

At the request of the Sierra Club, Wiedlin & Associates, Inc. (W&A) has conducted a technical review of the groundwater issues addressed in the April 2006 Draft Environmental Impact Report/Environmental Impact Statement (EIR) prepared for the United States Gypsum Company (USG) Expansion/Modernization Project. This review includes Appendix B-1, raw hydrologic data compiled by the United States Geological Survey (USGS), and Appendix B-2, the January 16, 2004 Ocotillo/Coyote Wells Hydrology and Groundwater Modeling Study (groundwater study) prepared by Bookman-Edmonston. This technical review addresses the groundwater study with respect to objectives, methods, and outcome followed by a review of the groundwater-related issues presented in the EIR with regard to water supply alternatives, identification of significant thresholds, and groundwater monitoring and mitigation. This overview is followed by specific technical comments that bear on the overall findings of the groundwater study and the EIR. Lastly, specific recommendations supplemental to those provided in the comments are presented.

GENERAL COMMENTS REGARDING THE GROUNDWATER STUDY (Appendix B-2)

Though it is evident an extensive amount of work has gone into the preparation of the groundwater study, there are significant deficiencies in the draft study that require revision in order to provide a reliable assessment of the long-term sustainability of groundwater resources under the proposed use. Overall the groundwater study does not identify specific technical objectives, provides inadequate presentation of field data, and inadequately documents groundwater modeling procedures and rationale. This lack of documentation along with a comparison of field measured groundwater levels to model predicted groundwater levels casts reasonable doubt on the reliability of the model to assess the impact the proposed increase in USG pumping will have on groundwater resources in the study area. As detailed in the following discussion, these inadequacies are sufficient to recommend that the groundwater study be re-drafted and resubmitted for public review.

27-1

The study is dated January 16, 2004 and was apparently released for public comment 30 months later in June of 2006. One consequence of the late release is that USGS groundwater water elevation and quality data provided in Volume II of the EIR/EIS, Appendix B-1, have not been updated in over five years, with the most recent data reported acquired in March 2001. Even with

27-2

a January 2004 date, it is reasonable to include data acquired through early 2003 as this data almost certainly had been compiled by the USGS well before the groundwater study was completed.

27-2
Con't.

Objectives

The absence of specific study objectives results in a report that lacks focus through the emphasis of the regional groundwater model results and the failure to utilize available field data to critically assess the most important issues that pertain to sustainable groundwater use in the proposed pumping area. Specifically, the study inadequately addresses how the difference in actual, measured groundwater elevations on either side of the Elsinore Fault in the vicinity of Ocotillo/Coyote Wells has changed historically. It is this hydraulic head relationship between high quality groundwater occurring in the alluvium west of the Elsinore Fault and poor quality groundwater occurring in the Palm Springs Formation east of the Elsinore Fault that will most likely determine if water quality in the Ocotillo/Coyote Wells area will be degraded over time and whether a water supply for USG and a potable water supply for residents will be sustainable. Groundwater elevation historically has been higher on the west side of the fault, keeping poor quality water out of the alluvial aquifer. Understanding this relationship of hydraulic head across the Elsinore fault, and how it has changed over time is invaluable in calibrating and validating the groundwater model so that the model can better predict how groundwater levels on each side of the fault might change in the future under the proposed pumping scenario.

27-3

Field Data Presentation

The following provides specific examples regarding the inadequacy of field data presentation. With rare exception, the study consistently relies on model generated groundwater elevation maps rather than maps based on actual field data. Additionally field data are rarely posted on groundwater elevation and groundwater quality maps, making it nearly impossible for the reader to assess whether the interpreted contour lines are reasonable and justifiable. No documentation or discussion of how USG groundwater production rates were measured or estimated since 1975 were provided. According to the Draft EIR, groundwater production rates from 1925 to 1975 were estimated by USG and re-estimated by the USGS (Skrivan, 1977). USGS's estimate was approximately 30 to 40% lower than USG's estimated report of groundwater production. This indicates a large uncertainty exists with respect to how much water USG was actually producing in that time period. This issue is further addressed in the detailed comments provided below. Well logs, which provide basic information on the subsurface geology, are not provided in the report. Aquifer test analyses were conducted to measure the hydraulic conductivity, a.k.a. permeability, and the water storage capacity of the water-bearing sediments. The report did not provide the raw data from these tests. As a result, it is not possible to verify whether the test analyses provide reasonable estimates for hydraulic conductivity and groundwater storage factors.

27-4

With the exception of Plate 1 in the groundwater report, all of the maps presented in the groundwater report and the groundwater section of the EIR/EIS figures are printed in letter size format. Considering the size of the study area, it is not feasible to present this information legibly in this format. Additionally, the maps presented in both reports most frequently do not have a scale bar or a north arrow. Further, the cultural/geographic features that would permit the reader to orient

27-5

themselves are inconsistently presented. Moreover, maps that depict similar areas are presented at apparently different scales, though how different is not easily assessed since no scale bar is provided. The poor quality of the graphics obfuscates the information and analysis presented and makes it difficult for the reader to fully understand the information, follow the authors' analysis, and assess the validity of the authors' interpretations and conclusions.

27-5
Con't.

Model Calibration and Documentation

Standard procedure in reporting groundwater model development includes comparing the groundwater elevations calculated by the groundwater model to actual groundwater elevations measured at water wells. The discrepancy between the model predicted water level and the field measurement is referred to as a residual. Standard procedure calls for mapping the residuals and statistically characterizing them. The study did not do this. W&A calculated the residual at a number of locations within the study area and found that the model overestimated groundwater elevations in most parts of the study area. The report should provide a rigorous analysis of the residual data. This concern is addressed further in the detailed comments presented below.

27-6

The report provided little documentation on the distribution of recharge across the study area. The report does provide a map showing where recharge was assigned. However, the amount of water recharged at individual locations was not reported. This lack of documentation prevents assessment of whether recharge rates are reasonably distributed considering drainage area and likely rainfall distribution. This concern is addressed further in the detailed comments presented below.

27-7

The report does not address the effect that changes in the constant head boundaries that define the northern, southern, and western boundary of the model may have on groundwater flow across the Elsinore Fault. It appears from the residual data developed by W&A, and hydrographs presented in the report that plot actual groundwater levels and groundwater model-calculated levels over time, that the southern boundary of the model, located along the Mexican border, has constant head values that may be unrealistically high. These potentially high boundary conditions likely force groundwater flow in the model to flow in an eastward direction and create a potentially unrealistic high groundwater level on the west side of the Elsinore Fault. If this is the case, the model results will unrealistically show a groundwater elevation condition that indicates poor quality water will not flow westward across the Elsinore Fault in response to the proposed increase in pumping. This concern is addressed further in the detailed comments presented below. A sensitivity analysis addressing how boundary conditions affect groundwater flow across the Elsinore Fault in the vicinity of Coyote Wells that demonstrates the boundary conditions selected are in fact appropriate is a reasonable exercise and should be included in the next draft of the groundwater report.

27-8

If the recalibrated groundwater flow model indicates a reversal of the hydraulic gradient across the Elsinore Fault may occur, then a solute transport model may need to be developed in conjunction with the groundwater flow model to assess water quality impacts from USG and community groundwater production in the Ocotillo/Coyote Wells area.

27-9

GENERAL COMMENTS REGARDING THE DRAFT EIR

Groundwater issues addressed in the Draft EIR that are independent of the Appendix B-2 groundwater study include water supply alternatives, and groundwater monitoring and mitigation. Technical concerns regarding each of the topics are addressed.

Water Supply Alternatives

It appears that the water supply alternatives presented in the Draft EIR did not consider the purchase of agricultural land with Imperial Irrigation District (IID) water rights nor did fully justify the dismissal of Plaster City groundwater as technically infeasible. With respect to utilizing Plaster City groundwater, the discussion of water quality limitations should be expanded by presenting groundwater quality data for this area and specifically addressing the water quality requirements of the manufacturing process. Additionally, the report dismissed a 100 gallon per minute (gpm) water well production capacity as insufficient even though this production rate is a significant portion of the required increase in plant water production.

27-10

The selection of water supply alternatives presented in the EIR is inevitably economically based. The alternatives selected for analysis in the Draft EIR should be considered based on the understanding the cost of obtaining groundwater from the USG wells at Coyote Wells includes not only the improved water line to Plaster City, but implementation of a substantial Monitoring and Mitigation Plan that will likely include the installation of monitoring wells and financial guarantees for providing treated water in the event water quality is degraded. In this light, other potential water sources may then look more favorable in an economic and regulatory sense.

27-11

Groundwater Monitoring and Mitigation

Thresholds for groundwater level and groundwater quality have been proposed. These groundwater thresholds are more general than thresholds established for other environmental issues addressed in the Draft EIR. This is reasonable because of the inaccessibility of the hydrogeologic environment. However to apply these thresholds in a meaningful way, a Groundwater Monitoring and Mitigation Plan needs to be developed as part of the EIR. This plan should identify specific wells that will be monitored for groundwater production, groundwater levels and water quality on a defined schedule. Since the groundwater thresholds state that USG is responsible for mitigation for a decay in groundwater resources, if found responsible, the plan must be sufficiently comprehensive in scope to answer the question of responsibility for declining water levels and degrading water quality. Though the thresholds defined in the Draft EIR can act as overall objectives for the Monitoring and Mitigation Plan, location specific trigger points are necessary to justly assess the need for mitigative actions for the protection of both USG and the other users of the groundwater resource. Potential actions may include increased monitoring, reduction in USG groundwater production, and/or temporary and long term plans for providing water to the Octotillo/Coyote Wells area.

27-12

The groundwater threshold for water quality included a provision for providing an alternate source of water to the residents. In the event this provision needs to be implemented, it will be a significant

27-13

economic burden and some economic guarantee that USG can meet this burden now and in the future, particularly in the event that water resources prove limited, seems prudent to protect the water supply and property values of others using the aquifer.

27-13
Con't.

SPECIFIC COMMENTS ON THE GROUNDWATER STUDY AND DRAFT EIR

1. Sections 2.6.3 and 2.6.4 of the Draft EIR pertaining to Partial Use and Full Use of Water from the IID, Alternatives to the Proposed Action -

W&A concurs with USG's legitimate concerns regarding unknowns associated with the "legal, social, political, and economic feasibility of obtaining Colorado River water pursuant to a service agreement with IID." The impacts of these two alternatives (Sections 3.3.3.9 and 3.3.3.10) appear to be positive with respect to both the quality and quantity of groundwater within the Ocotillo and Coyote Wells Groundwater Basin. A potentially viable option not presented in these two sections would be the purchase and transfer of an existing water right (e.g. farmer within the IID or elsewhere along the Colorado River system). At a minimum, an explanation of why this alternative was not considered should be included.

27-14

2. Section 2.6.5.1 of the Draft EIR, Drilling of New Production Wells in the Vicinity of the Plaster City Plant, Alternatives Considered but Rejected -

This alternative was rejected based on technical concerns regarding water quality and water quantity. While these concerns are legitimate, the site-specific data used to reject this alternative were not presented. Water quality data obtained in the mid-1920's are referenced, but not presented, indicating groundwater underlying the Plant contained Total Dissolved Solids (TDS) "in the range of 15,000 parts per million (ppm), or one half the salinity of ocean water." Is this TDS value the average? This section describes aquifer characterization work performed at the Plant in July 2004, which included pumping tests and collection of groundwater samples to assess water quality. However, water quality data collected at the Plant in July 2004 are not presented. How do TDS data collected in July 2004 compare with the TDS data collected in the mid-1920's? With respect to water quantity, the statement is made that "production rates per well would be less than 100 gpm" and that "numerous wells would be drilled at distances up to one mile or more from the plant." However, because July 2004 pumping test results and sustainable production rate estimates were not presented, it is not known how many wells might be needed to meet Plant needs. It should be noted that a single well producing 100 gpm, if pumped continuously, yields approximately 161 acre-feet per year (AF/yr). W&A recommends the water quality and pumping test data collected in July 2004 that were used to justify rejecting this alternative be presented in the revised draft EIR.

27-15

3. Section 3.3 of the Draft EIR, page 3.3-26 and Table 3.3-3A and 3B.

The report refers to the SDSU Masters Thesis by Jansen (1986) in discussing water quality distribution and geologic control on groundwater and groundwater quality. The SDSU Masters Thesis by Mark (1986) builds on the initial information developed by Jansen and

27-16

provides a more rigorous analysis of the topic. The Draft EIR fails to provide tabulated and mapped data of the high TDS occurrences that occur east of the Elsinore/Laguna Faults. These data are the basis for the concern that groundwater sustainability is not simply a function of lowering groundwater levels and groundwater quantity, but that potable water sustainability may be limited by the intrusion of brackish water westward across the Elsinore Fault if water levels in the Coyote Wells/Ocotillo area decline below water levels east of the fault. The revised draft EIR should fully document the time and spatial occurrence of high TDS in the study area.

27-16
Con't.

4. Figure 3.3-7 of the Draft EIR, page 3.3-23 -

The figure is entitled "*Groundwater Quality (TDS Concentrations in mg/l).*" However, this figure appears to illustrate model-projected groundwater elevations. W&A recommends the correct figure be incorporated in the revised draft EIR, and that this figure include all the field data used to develop the contour lines. The most recent data set should be used.

27-17

5. Section 3.3 of the Draft EIR and Appendix B-2-

It should be noted that many of the figures in Section 3.3 of the Draft EIR and the groundwater study have neither north arrows nor scale bars, which makes it difficult to orient and spatially relate the information presented on individual figures and between figures. W&A recommends north arrows and scale bars, as well as well locations, major roadways, faults and communities be incorporated on all maps presented in the revised draft EIR.

27-18

6. Page 3.3-29 of the Draft EIR -

Groundwater withdrawals by USG constitute the largest pumping stress in the basin, accounting for more than 50 percent of the pumping. However, there is significant uncertainty associated with the USG pumping volumes. These uncertainties carry over into development of the groundwater model, interpretation of the model results, and in making long-term groundwater quality and quantity management decisions. On Page 3.3-29 and throughout the document, reference is made to water usage at the USG Plant in Plaster City. Plant water is produced by three wells located in the Ocotillo/Coyote Wells Groundwater Basin. The Draft EIR acknowledges the uncertainty associated with groundwater production rates prior to 1981, including development of a "*U.S. Gypsum Variance*" in Figure 3.3-8, which describes a 70 percent difference between rates reported to the USGS and estimated rates derived from wallboard production figures for the period 1970-1975. For the purposes of generating Figure 3.3-8 and groundwater modeling, should the "*U.S. Gypsum Variance*" be applied to data prior to 1970? Because of the significance of the hydraulic stress generated by USG pumping, this issue should be more thoroughly evaluated and discussed both in Section 3 and in Appendix B-2 (Groundwater Modeling Study prepared by Bookman-Edmonston, 2004), including a discussion of the limitations associated with the production data and limitations associated with making management decisions using these data. Finally, the Draft EIR states "*Since 1981, the groundwater extraction rate has*

27-19

reportedly been measured at each well by USG. Thus, these data are considered the most reliable.” Are there, or are there not, flow meters and/or totalizers installed at the USG production wells? W&A recommends these issues regarding uncertainties associated with USG pumping be thoroughly evaluated and discussed in the revised draft EIR.

**27-19
Con't.**

7. Tables 3.3-5 and 3.3-6 of the Draft EIR -

Though these tables present well construction and groundwater level information, they are not cited in the text. This reflects the fact that little discussion of the scope of groundwater monitoring in the study area is presented in the Draft EIR, or for that matter the Appendix B-2 groundwater study. Though this level of detail is probably best suited for the groundwater study, a discussion of the comprehensiveness or lack of comprehensiveness of groundwater level and quality monitoring is appropriate so that the reader understands the limitations of the data set with which authors have worked. Additionally, recognition of the limitations of the existing monitoring scope can provide part of the basis for development of the groundwater monitoring plan.

27-20

8. Figures 3.3-9, 3.3-10, and 3.3-11 of the Draft EIR -

Consistent with the findings of the Huntley report (October 1979), understanding the relationship between groundwater elevations on both sides of the Elsinore and Laguna-Salada faults is critical to understanding the potential for transport of more saline water from the northeast across the fault to the southwest. These three figures illustrate groundwater elevation hydrographs for wells in the area. However, the hydrographs only present groundwater elevation data through early 2000. W&A assumes an additional six years of groundwater elevation data are available for many of the wells illustrated on these three figures. Accordingly, W&A recommends these figures be updated, vertical scales revised so that water level trends are more easily recognized, and that trends in groundwater elevations within the basin be discussed in the revised draft EIR. W&A also recommends observed groundwater elevation trends on both sides of the Elsinore and Laguna-Salada under existing pumping conditions be extrapolated into the future, and a discussion regarding the potential for future migration of saline groundwater to the southwest be presented in the revised draft EIR.

27-21

9. Page 3.3-42 and 43 of Draft EIR, groundwater discharge and velocity calculations-

These paragraphs provide calculations of groundwater velocity and groundwater outflow from the southern boundary of the study area at the international border. The calculations rely on the gradient measured on Figures 3.3-5 and 3.3-6. These figures depict model generated groundwater elevation contours rather than contours based on actual field data. Gradients for this purpose should be calculated directly from field data. The outflow of groundwater calculated from this effort should be used to constrain the model, rather than the reverse. Use of actual field data to calculate the hydraulic gradient may reconcile the lower estimate derived and presented in the Draft EIR compared to the estimates derived by the USGS (1977), Huntley (1979), and Bookman-Edmonston (1996).

27-22

The groundwater velocity calculations used an effective porosity of 30 percent for both the alluvium and the presumably more indurated Tertiary marine sediments. The Appendix B-2 groundwater study reports site specific yield measurements, a.k.a. effective porosity, of 8.3 and 10.6 percent and assigned a specific yield of 10 percent to the alluvial sediment layer in the model. The groundwater study estimates that the marine sediments have a specific yield that likely ranges between 1 and less than 5 percent. For the southern portion of the basin, applying specific yield values consistent with the groundwater study will result in much higher estimates of groundwater velocity; on the order of 60 feet per year for the alluvium rather than 20 feet per year in the alluvium in the southern portion of the basin and 140 feet per year rather than 10 feet per year in the marine sediments. Similar changes apply to the up gradient portion of the study area.

27-22
Con't.

These revised groundwater velocity estimates will affect the discussion and conclusion regarding the continued drop in groundwater levels being related to ancient high groundwater recharge rates and the slow propagation of groundwater flow in the valley presented on page 3.3-44, first paragraph. W&A recommends that the rationale proposed for continued decline in groundwater levels in spite of above average recharge conditions be re-evaluated.

27-23

10. Page 3.3-49 of the Draft EIR, third paragraph -

A thorough comprehension of observed groundwater elevation trends is critical to understanding the dynamics of groundwater flow within the basin, and is especially important when making management decisions about potentially expanded future use of groundwater. As discussed on Page 3.3-49, static groundwater elevation data indicate water levels in the Ocotillo/Nomirage area have steadily declined over the last 30 years, for an average water level decline of one foot every five years. The text states "*This is somewhat surprising because the rate of rainfall in the basin from 1976 to 1993 was generally above average (see Figure 3.3-2) and the rate of water production from the basin from 1979 to 1996 decreased by almost 45 percent (see Figure 3.3-8).*" As discussed on Page 3.3-44 of the Draft EIR, this departure may be attributable to the relatively low groundwater velocities and the relatively long time period for water levels to reach equilibrium. However, these data may also suggest the estimated pumping rates from the USG production wells are biased low. W&A recommends plausible theories for this departure from what was expected should be developed and presented in the revised draft EIR, and their effects on groundwater model predictions, uncertainty, and management decisions should be discussed. This comment also applies to the statement made in the final paragraph of Page 3.3-50 of the Draft EIR.

27-24

11. Page 3.3-53 and 54, Figure 3.3-11 of the Draft EIR -

Figure 3.3-11 indicates that groundwater levels on the west side of the Elsinore Fault zone decreased at wells 29L1 and 29L2 at a rate of about 0.55 feet per year for the period of record in the late 1970's and 1980's. The same figure also shows that groundwater levels at well 29H1 on the east side of the fault zone remained essentially the same during that time

27-25

frame and for the overall period of record from the late 1970's to 2000, groundwater declined at a rate of 0.2 feet per year.

**27-25
Con't.**

Contrary to what the text states on page 3.3-54, these data indicate groundwater levels on the west side of the fault are declining faster than groundwater levels on the east side of the fault by 0.55 to 0.35 feet per year under historic groundwater pumping rates. Based on the measured water level data presented in Figure 3.3-5, the head difference across the fault zone in 1974-1975 near Coyote Wells is less than 14 feet. If this differential decline in groundwater level persisted, the groundwater elevations across the fault would be approximately the same in 25 to 40 years or by 2000 to 2015. Unfortunately, neither the Draft EIR nor the groundwater study present water level contour maps based on actual field measurements at incremental time periods to evaluate this trend. In fact, if this trend actually persists, it would indicate that the model is underestimating the extent of drawdown on the westside of the fault.

12. Page 3.3-65 of the Draft EIR, Section 3.3.3.6, Second Bullet

The proposed threshold of significance is stated in two conflicting parts. The first part states that a significant impact from the proposed increase in pumping would include a net deficit of aquifer volume or lowering of the local groundwater water table. The second part states that the threshold shall be that the production rate of pre-existing nearby wells drop to a level that cannot support existing land uses or permitted future uses.

27-26

Based on the decades-old steady decline of groundwater levels in the Ocotillo/Coyote Wells area, a net deficit in aquifer volume is already occurring. Since USG is already the dominant producer of groundwater in the area, this net deficit of aquifer volume is already attributable largely to them. Since the intended threshold of significance is the second part of the paragraph, this statement should stand alone as the definition of the proposed threshold so it can be reviewed for its own merits.

13. Page 3.3-65 and 66 of the Draft EIR, Section 3.3.3.6

Development of a more thorough and detailed monitoring and mitigation plan for landowners (presently developed and undeveloped) whose future water supply and real estate values might be adversely impacted by USG groundwater withdrawals. These details include, but are not limited to the following: area specific water level and water quality trigger points that require preventive action by USG, assured long-term water supply replacement if necessary, collection of comprehensive baseline water level and water quality data from a network of existing and proposed wells, the use of sentry wells to observe changes in water quality and drawdown before the impact community wells, and development of a secure funding mechanism (e.g., bond) for water supply replacement in the event USG encounters financial difficulties in the future. These specific trigger points should in part be developed by comparing the revised model predictions to actual field conditions at specific areas in the Coyote Wells/Ocotillo region, as well as other areas in the basin.

27-27

14. Page 3.3-66 of the Draft EIR, last paragraph -

As discussed in comment #12, thorough comprehension of observed groundwater elevation trends is critical to understanding the dynamics of groundwater flow within the basin, and is especially important when making management decisions about potentially expanded future use of groundwater. As presented on page 3.3-66, results of the groundwater model (Bookman-Edmonston, 2004) indicate that under the baseline scenario, water-level declines will be approximately one foot every eight years, yielding an estimated water-level decline over 80 years of “*up to 10 feet under baseline conditions.*” However, as discussed on Page 3.3-49 of the Draft EIR, water level measurements made over the last 30 years indicate water levels have declined one foot every 5 years. This apparent discrepancy suggests the model-projected declines in water levels for the 80-year baseline scenario may be biased low, meaning the model is underestimating water level declines, since extrapolation of the observed rate of decline over the past 30 years (one foot every five years) over the next 80 years suggests water levels will decline approximately 16 feet. If the model-projected declines in water levels for the 80-year baseline scenario are biased low, this suggests the model-projected declines in water levels for the 80-year scenarios with increased pumping are also biased low. If this is the case, then the model is of limited value in making management decisions regarding long-term sustainability of both water quality and water quantity. W&A recommends this apparent discrepancy be addressed and remedied as necessary for the revised draft EIR.

27-28

15. Appendix B-1 (USGS Hydrologic Data), Unnumbered Figures and Unreferenced Well IDs -

Appendix B-1 appears to contain valuable groundwater elevation and groundwater quality data, but there is no easy way for the layperson to associate the data presented in Appendix B-1 with wells in the study area. Well locations illustrated on the unnumbered figures at the beginning of Appendix B-1 are not labeled. Furthermore, there is no easy way for the layperson to associate the well IDs referenced on the data sheets in Appendix B-1 to wells illustrated on figures within the Draft EIR. Finally, it is not clear whether the wells included in Appendix B-1 are within the study area and whether all of the data for wells within the study area were used. For instance, Appendix B-1 appears to contain water level data for wells 18K1S and 11E2S; however, these wells do not appear to be referenced on any figures within the Draft EIR. W&A recommends Appendix B-1 be modified for the revised draft EIR so that it is easier to correlate the water quality and water level data with wells illustrated on report figures.

27-29

16. Section 3, Groundwater Study-

Groundwater studies typically include copies of well logs so that readers may review the nature of materials encountered during drilling and have a better understanding of the subsurface. However, no well logs were presented in the report. Additionally, the well inventory table presented in the EIR should be presented in the revised groundwater study report as this is where the detailed analysis of groundwater information is presented. Additionally, a well location map that includes all wells in the study area that are in the

27-30

- USGS database should be included in both the revised draft EIR and the revised groundwater study. This map should be fully annotated, including what aquifer the well is completed in. **27-30 Con't.**
17. Appendix B-2, General Modeling Comment -
- A comprehensive presentation of TDS distribution across the study area was not presented in plan view or in tabular format in the groundwater study or in the Draft EIR. However, Mark (1987), documents in plan view large contrasts in TDS concentrations across the Elsinore and Laguna Salada Faults. Under steep hydraulic gradients density driven flow is likely not a significant process. However, the process of density driven groundwater flow may become influential under flatter gradients such as those that may occur across the Elsinore Fault near the USG pumping center as production increases and time elapses. This process could become locally significant in the area most vulnerable to brackish water intrusion and is not accounted for in the groundwater model. **27-31**
- Consequently, decision makers should be aware that the model could underestimate the propensity for westwardly groundwater flow across the fault into the Coyote Wells/Ocotillo area. W&A recommends a discussion the issue of density driven flow, and the potential limitations of not simulating it be presented in the revised groundwater study.
18. Page 1-2 of Appendix B-2 -
- The USGS can be viewed as a technically capable independent third party with respect to the groundwater study. As discussed in Appendix B-2, Peter Martin of the USGS was contacted and provided input on model structure, input parameters, and boundary conditions during model development. Were all of the USGS recommendations with respect to the groundwater flow model incorporated? Did Mr. Martin review the final modeling report presented in Appendix B-2, and if so, was Mr. Martin satisfied that his comments had been adequately addressed? Also, did the USGS provide any other input on the groundwater study, such as recommendations for development and implementation of a groundwater monitoring program (water quality and groundwater elevation)? If so, have these recommendations been implemented? Affirmative answers to these queries would be valuable in allaying public concerns regarding the long-term sustainability of water quantity and water quality in the Ocotillo and Coyote Wells Groundwater Basin. W&A recommends all correspondence from the USGS be attached to the revised groundwater study. **27-32**
19. Page 3-6 of Appendix B-2, second paragraph of Section 3.2 -
- An aquifer's response (i.e. change in water level) to pumping over time varies depending on whether an aquifer is unconfined (i.e. water table aquifer) or confined (i.e. somewhat isolated from atmospheric pressure). The aquifer of the basin is described and was modeled as an unconfined aquifer consisting of the upper alluvial material (Layer 1) overlying the older marine sediments (Layer 2). The saturated thickness of the aquifer varies, but in many areas exceeds 400 feet. Considering the probable interbedded nature of the alluvium and the magnitude of drawdown predicted by the model, it is likely that much of the alluvial aquifer **27-33**

is responding as a confined aquifer as it is not being dewatered. This is also true of Layer 2, where the marine sediments underlie the alluvial aquifer. Given the relatively long time periods of the flow simulations of up to 80 years for the future scenarios, this distinction with respect to model projections may not be significant, but could potentially underestimate the magnitude of drawdown induced by the proposed pumping. W&A recommends the sensitivity of the model be evaluated with respect to whether portions of the aquifer are defined as confined rather than unconfined (with appropriate values of storage coefficients used instead of specific yields), and a discussion of this model sensitivity presented in the revised groundwater study.

**27-33
Con't.**

20. Section 4 of Appendix B-2

The groundwater study addresses water use by other parties in the basin besides the applicant. However, no discussion of what the water demand for the basin would be if and when the basin is fully built out per the density requirements of the Imperial County General Plan. Though the model addresses cumulative growth by increasing groundwater demand annually by 1.4 percent, there is no way to know how this accounting compares to water demand at full build out. It seems reasonable that Imperial County would want to know if its land use decisions are compatible with implementing the long term general plan and the resources of the area.

27-34

21. Page 4-2 of Appendix B-2, paragraph 2 -

A section addressing existing water wells in the area of the proposed increase of pumping should be added to the revised groundwater study. This section should discuss well construction specifics for the US Gypsum wells and provide their state well identification number so that the reader can find them in the USGS data report (Appendix B-1). The section should also identify the major water production wells serving the community in this area and compare the elevation of the well screens for these wells to the USG wells. Additionally, the reasons for the USG production well abandonment may be pertinent to the groundwater study. As discussed on Page 4-2, USG has abandoned three production wells. Are well logs, groundwater elevation data, or water quality data for these abandoned wells available, and why were these wells abandoned? Also, why was a replacement for well No. 6 drilled in 1999? W&A recommends a discussion of these issues be included in the revised groundwater study.

27-35

22. Page 5-2 of Appendix B-2, second paragraph of Section 5.2 -

Many groundwater flow models, including MODFLOW, employ the use of constant head boundaries to define groundwater elevations at model boundaries. Constant head boundaries are a useful tool, but must be employed with care because they exert a strong influence on fluxes into and out of models. Boundary conditions along the northeastern limit of the model and along the Mexican border were defined as constant heads, which appears to be a logical groundwater modeling approach. However, neither the constant head values assigned to the boundaries nor a discussion of the rationale used in developing the boundaries is presented.

27-36

W&A assumes extrapolation of the available water level data to the boundaries was used in constant head boundary development. Were the constant head values in layers 1 and 2 at a particular row and column given the same value, or was a vertical hydraulic gradient assumption applied. Based on the distances between the constant head boundaries and available groundwater elevation data, a significant amount of uncertainty is likely associated with prescribing the values at the constant head boundaries. Furthermore, it is likely the flow model results in the interior of the model are sensitive to the head values prescribed at the model boundaries. Was the sensitivity of the model to varying constant head values evaluated? More details regarding the technical rationale used in developing and applying constant head values, including the values used and the results of sensitivity analysis, if performed, should be presented in the revised groundwater study.

**27-36
Con't.**

23. Figure 5-3 of Appendix B-2, illustration of Layer 2 Horizontal Hydraulic Conductivity.

While it may be a function of poor quality of the copy in W&A's possession, it appears most of Layer 2 has been assigned a horizontal hydraulic conductivity value of 15 feet per day (ft/day), not 1 ft/day as described in the text. This figure may need to be modified. However, if a horizontal hydraulic conductivity value of 15 ft/day was used instead of the intended 1 ft/day, the decline in groundwater levels induced by the proposed pumping rate would likely be notably underestimated.

27-37

24. Table 5-1 of Appendix B-2, Historic Groundwater Pumping -

As discussed in Comment #6, there is significant uncertainty associated with the USG pumping volumes. These uncertainties carry over into development of the groundwater model, interpretation of the model results, and in making long-term groundwater quality and quantity management decisions. If flow meters were not installed onto the USG production wells until 1981, what method was used to estimate groundwater production attributed to each of the production wells prior to 1981. W&A recommends a discussion of this issue be presented in the revised groundwater study, and if necessary a sensitivity analysis conducted with the model addressing the potential range of past USG groundwater production.

27-38

25. Page 5-4 and Figure 5-7 of Appendix B-2, first complete paragraph -

The recharge of groundwater to the basin is a significant portion of the water balance. It is likely the groundwater flow model is sensitive to the distribution of recharge rates. However, with the exception of recharge cells illustrated on Figure 5-7, no details regarding the distribution of recharge was presented. Regarding the final recharge estimates used, W&A suggests including a table and/or figure presenting the recharge rates applied along each stream course in the revised groundwater study. Recognizing the limitations associated with estimating recharge from each of the sub-basins, it would be valuable to know whether or not the recharge applied to each stream course from each sub-basin correlates well with the elevation (rainfall distribution) and drainage area of each of the sub-basins.

27-39

26. Page 5-4 of Appendix B-2, first paragraph of Section 5.3 -

Because it is likely the model is sensitive to the distribution and magnitude of recharge rates and hydraulic barrier characteristics, a more thorough discussion is warranted on how these parameters were spatially distributed and their rates varied. The text states the recharge rate and barriers' hydraulic characteristics were adjusted within a predetermined range of uncertainty during calibration. The revised groundwater study should describe the rationale for developing the predetermined ranges of uncertainty for these parameters.

27-40

27. Section 5.3 of Appendix B-2, Model Calibration, General Comment -

How a model responds to varying parameter changes during model calibration is important in understanding the limitations of any model. The discussion of model calibration is relatively brief for a modeling effort of this size and importance. The report did not mention how many calibration simulations were performed and what parameter changes were made. Furthermore, no residual head (residual head defined as measured head minus model-projected head) calibration statistics for the final calibration simulation were presented. W&A suggests the discussion of model calibration be expanded in the revised groundwater study to include these elements.

27-41

28. Section 5.3 of Appendix B-2, Figures 5-13 through 5-27 -

Residual head calibration statistics are valuable because they indicate whether the water levels predicted by a model are too high, too low, or approximately equal to observed heads. Knowing how well a model is calibrated is important because it provides a sense of certainty or uncertainty when evaluating future projections made using the calibrated model. Based on a review of the hydrographs comparing observed versus model-projected water level data, W&A estimated the mean of residual head (residual head defined as measured head minus model-projected head) is approximately -4 feet. A negative mean residual head implies the model-projected heads are too high, which is not conservative from the standpoint of estimating actual water levels at wells. W&A recommends a discussion of this issue be presented in the revised groundwater study, including limitations associated with model-projected water levels that are biased high.

27-42

29. Section 5.3 of Appendix B-2, Figures 5-25 through 5-27 -

As discussed in comment #19, unconfined and confined aquifers respond differently to pumping stresses, and modeling portions of the aquifer as unconfined or confined may effect model-projected water levels. Based on a review of the hydrographs comparing observed versus model-projected water level data for the three wells proximal to the McDougal well (wells 11H3, 11G4, and 11G1), model-projected water levels are approximately 11 to 15 feet higher than observed water levels for the year 2002. However, it should be noted the observed water levels at wells 11G4 and 11G1 appeared to still be recovering and this discrepancy may be less in 2006. In this area of the model, the calibration does not appear to be reasonable. The magnitudes of model-projected drawdown correlate relatively well

27-43

with the magnitudes of observed drawdown at wells 11G4 and 11G1 generated by pumping at the McDougal well, suggesting the hydraulic conductivity prescribed in the model is reasonable. However, the delayed recovery illustrated by the observed data indicates these wells may be screened in what is a confined aquifer. W&A suggests rerunning the model to evaluate the effects of assuming layer 2 of the model is confined, which would include the use of storage coefficient values instead of specific yields.

27-43
Con't.

30. Section 5.3 of Appendix B-2, Figures 5-25 through 5-27 -

Model-projected groundwater elevations and the model-projected hydraulic gradient along the United States-Mexico border are important because they define not only the rate of groundwater flow south out of the model, but they also have an effect on the direction of groundwater flow along the Elsinore and Laguna-Salada faults. This effect occurs because if too little water flows south across the U.S. Mexico border (relative to estimates derived using other water balance methods), groundwater will preferentially flow to the northeast and flow out of the model along the northeast constant head model boundary. This is a very important concept, because this will define the model-simulated direction of groundwater flow along the Elsinore and Laguna-Salada faults, which is the transition zone between saline water to the northeast and higher quality water to the southwest. Based on a review of the hydrographs comparing observed versus model-projected water level data for the three wells proximal to the McDougal well (wells 11H3, 11G4, and 11G1), model-projected water levels are approximately 11 to 15 feet higher than observed water levels for the year 2002. Going further south, model-projected water levels at wells 18K1 and 11E2, not presented on the well location map, but included in the Appendix B-1 raw data, are approximately 16 feet and 25 feet too high. These data indicate that the constant head boundaries assigned to the southern model boundary along the U.S.-Mexico border are higher than actual conditions.

27-44

If the constant head boundary values at the U.S.-Mexico border are set too high, this would have the effect of reducing the rate of groundwater flow south across the U.S. Mexico border. As discussed, the result would be a model that predicts preferential flow out of the northeast corner of the model and under predicts flow across the international border.

Based on a comparison of Figure 3.3-5 of the Draft EIR (Simulated and measured water level contours prepared by Skrivan, 1977) with Figures 5-10 and 5-11 of Appendix B-2 (Calibrated 2002 Groundwater Elevations for Layers 1 and 2, respectively), it appears this process may be occurring in the 2004 groundwater flow model. Note how flat the horizontal hydraulic gradient becomes in Figures 5-10 and 5-11 relative to the gradient (simulated and observed) illustrated on Figure 3.3-5. This observation is critical because restricting groundwater flow south across the international border has the effect within the model of pushing low salinity water to the northeast across the Elsinore and Laguna-Salada faults. More groundwater flow to the south across the international border, in conjunction with proposed increased groundwater production from the USG wells, might draw more saline water south across the Elsinore and Laguna-Salada faults. This concern is consistent with the concerns outlined by Huntley (October 1979).

W&A recommends the model be recalibrated to better match observed heads in the vicinity of the McDougal well, which might be accomplished by lowering the constant head boundary at the U.S.-Mexico border. In addition, W&A recommends the issue of boundary heads and horizontal hydraulic gradients along the international border be more thoroughly evaluated and discussed in the revised groundwater study.

27-44
Con't.

31. Section 5.3 of Appendix B-2, Model Calibration -

A comparison of water balance estimates derived using other methods with the model-projected water balance (e.g. fluxes from recharge or across model boundaries) is useful because the water balance estimates from other methods should constrain the model-projected water balance estimates. Section 5.3 of Appendix B-2 includes a comparison of the calibrated recharge rate to estimates derived using other methods. However, Section 5.3 does not include presentation and discussion of fluxes across the constant head boundaries. Table 2-1 in Volume 1 of the Draft EIR documents the hydrologic balance derived from model calibration results, but does not compare these calibrated model fluxes to flux estimates derived using other methods. For example, Table 2-1 references a calibrated model groundwater flux south across the U.S.-Mexico border of 515 AF/year. However, the estimated groundwater flux south across the U.S.-Mexico border identified in the Huntley report (October 1979) is 1245 AF/year (see Table 2 of the Huntley report). Thus the model-simulated flux out of this constant head boundary is less than half the estimate derived using other methods. As discussed in the previous comment, model simulations in which the flux south across the U.S.-Mexico border is under simulated would have the effect of over simulating groundwater flow from the southwest to the northeast across the Elsinore and Laguna-Salada faults. This observation is critical because it has the effect within the model of pushing low salinity water to the northeast across the Elsinore and Laguna-Salada faults when in reality higher salinity water might actually flow to the southwest across the fault transition zone. W&A recommends Section 5.3 of Appendix B-2 include a table comparing the calibrated model hydrologic balance to hydrologic balance estimates derived using other methods, as well as a discussion of any deviations between the two and the effects on model uncertainty.

27-45

32. Section 6 of Appendix B-2, Future Groundwater Impacts -

The preceding comments regarding uncertainties of the calibrated model associated with constant head boundaries and treatment of the entire aquifer as unconfined suggest there may be significant limitations associated with the predictive simulations. Accordingly, with the exception of Comment # 14, which pertains to future groundwater impacts, W&A has no additional comments regarding Section 6.

27-46

33. Appendix B-2, Section 5-

Groundwater modeling efforts of this magnitude typically include a series of simulations performed to evaluate the sensitivity of the model to changes of modeling parameters (e.g., recharge rates, hydraulic conductivity, constant head boundary values) within reasonable

27-47

ranges. The results of sensitivity analyses are valuable in ascertaining the uncertainty associated with model projections. For this project, where management decisions will be made regarding the long-term sustainability of both water quality and water quantity, knowledge of model uncertainty derived from model sensitivity analyses would be useful. Accordingly, W&A recommends model sensitivity analyses be completed and included in the revised draft EIR.

27-47
Con't.

34. Appendix B-2, General Comment - Appendices for groundwater modeling efforts of this magnitude and importance typically include copies of model output, or digital copies of the model files so that technical professionals can review such issues as convergence criteria and the magnitude of mass balance errors. However, neither of these were presented in the Draft EIR. W&A suggests copies of this information be included in the revised draft EIR.

27-48

SUMMARY

The hydraulic head relationship between high quality groundwater occurring in the alluvium southwest of the Elsinore/Laguna-Salada faults and poor quality groundwater northeast of the faults will most likely determine if water quality in the Ocotillo/Coyote Wells area will be degraded over time and whether a water supply for USG and a potable water supply for residents will be mutually sustainable. The Draft EIR and supporting documentation inadequately evaluates this critical relationship. Accordingly, the following tasks should be completed in the groundwater study in support of the Revised Draft EIR:

27-49

- Present the available hydrogeologic data (e.g. water levels, water quality, lithologic logs) in a more cohesive and understandable manner, including preparation of improved figures, tables, and appendices.
- Develop and present a detailed groundwater monitoring plan so that groundwater flow and water quality conditions under the existing and future USG pumping regimes are better understood.
- Recalibrate the groundwater flow model to better simulate observed groundwater elevations and to better simulate the flux across the U.S.-Mexico border derived using other methods.
- Perform groundwater flow model sensitivity analyses to better define the limitations and uncertainties of the groundwater flow model, and include a discussion of these limitations and uncertainties so that managers are better informed during the decision making process.
- If the recalibrated groundwater flow model indicates a reversal of the hydraulic gradient across the Elsinore Fault may occur, then a solute transport model may need to be developed in conjunction with the groundwater flow model to assess water quality impacts.

27-50

27-51

27-52

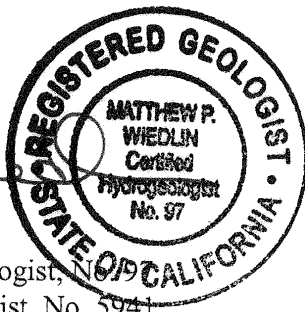
27-53

In addition, a detailed groundwater monitoring and mitigation plan for landowners whose future water supply and real estate values might be adversely impacted by USG pumping must be developed and presented. In order to allay the concerns of landowners, this mitigation plan should include development of a secure funding mechanism for water supply replacement in the event USG encounters financial difficulties in the future.

27-54

Thank you for your consideration of these comments. Should you have any questions regarding these comments or require additional information, please feel free to contact me.

Sincerely,



Matthew P. Wiedlin
California Certified Hydrogeologist, No. 5941
California Professional Geologist, No. 5941

cc: Peter Martin, USGS

Dr. David Huntley, Professor Emeritus, SDSU, Department of Geological Sciences

David Mark

Sam Williams

Letter 27
Wiedlin & Associates Inc., July 15, 2006

Comment 27-1:

Response: See General Responses 4.3.6, 4.3.8, 4.3.9.

This comment refers to four major concerns, lack of specific technical objectives, inadequate presentation of field data, inadequate documentation of model implementation, and missing discussion on calibration results.

Technical objective

The 2004 Bookman-Edmonston Modeling Study, Appendix B-2 of the Draft EIR/EIS, describes the general goal of the study as the update and revision of previous modeling studies to incorporate more data and improved modeling techniques. More discussion regarding the model objectives can be found in 4.3.8, Application of the Numerical Model.

Field Data

Field data for groundwater levels and groundwater quality are presented and discussed in the Draft EIR/EIS in sections 3.3.3.3 and 3.3.3.4, respectively. These data are also included in Appendix B1 of the Draft EIR/EIS. Recent data (data collected since the preparation of the Modeling Study) are included in 4.3.6, Hydrogeology and Groundwater.

Model Documentation

The Modeling Study summarizes the development of the numerical model. Clarification on the water balance and how inflows and outflows were implemented in the model can be found in 4.3.6, Hydrogeology and Groundwater.

Calibration

Details on the steps taken during calibration can be found in the 4.3.9, Groundwater Model Calibration. The Modeling Study compared calibrated model groundwater levels to actual field data for the key wells used as calibration targets. These hydrographs are included in the Modeling Study as Figures 5-13 through 5-27. Additional clarification of the consistency between the model and observed data is discussed in 4.3.8, Application of the Numerical Model.

The commenter's opinions concerning the adequacy of the Model Study are noted. Under CEQA, however, disagreement among experts does not make an EIR/EIS inadequate. In this case, all reasonably feasible efforts have been made to evaluate the potential impacts of the Proposed Action on groundwater

resources, and the Final EIR/EIS represents an adequate, complete, and good faith effort at full disclosure of all such potential impacts.

Comment 27-2:

Response: Recent data, for both groundwater levels and groundwater quality, are included in 4.3.6, Hydrogeology and Groundwater. A map showing wells currently being monitored by the USGS and hydrographs for select wells and discussion on the recent data and the continuation of trends in the Basin are included in the General Response. Although the recent data helped to confirm long term trends in the aquifer, the data did not provide any new information on the groundwater system.

Comment 27-3:

Response: This comment refers to the technical objectives of the model and the difference in water levels and water quality in the area formally characterized as the fault zone. This area is now considered to be the geologic contact between the alluvium (near Ocotillo) and the Palm Springs and Imperial formations (east of Ocotillo). Technical objectives of the model are discussed in Appendix B-2 of the Draft EIR/EIS and clarified in General Response 4.3.8 Application of the Numerical Model.

Figures 5-17 and 5-18 of the Modeling Study show the modeled and historical groundwater elevations east of Ocotillo and Figures 5-16, 5-19 and 5-20 show the modeled and historical groundwater elevations near Ocotillo. These figures show that both modeled and historical groundwater elevations on both sides are declining. These water levels and the geology of this area are discussed in detail in General Response 4.3.6, Hydrogeology and Groundwater.

The commenter is correct that the hydraulic head relationship between high quality groundwater occurring in the alluvium and the poor quality groundwater occurring in the Palm Springs Formation east of Ocotillo will most likely determine if water quality in the Ocotillo-Coyote Wells Groundwater Basin area may be degraded over time and if so when this may occur. As shown in Figures 5-12 through 5-16 of the Modeling Study, the modeled and historical groundwater elevations show that the head will remain higher in the alluvium. Figures 6-10, 6-11 and 6-12 of the Modeling Study show that the model does not predict a reversal in groundwater flow from east to west at the end of modeled year 2082 with 767 AF/Yr of pumping.

Comment 27-4:

Response: In regards to mapped observed data, Figure 5-10 from the Modeling Study shows the groundwater elevations at each well at the end of 2002. Data not

available is marked NA. Groundwater elevations for 2002 were not available for the wells shown on Figure 5-11. Limited data are available for the study's period of record 1925-2002. However, Figure 5-8 does show what the USGS (Skrivan) reported as the estimated 1925 groundwater elevation.

Documentation of how USG groundwater production rates were estimated was provided on page 6-2 of the 1996 Bookman-Edmonston report. Table 4-2 in the Modeling Study updates Table 6-2 in the 1996 report. The pumping volumes used in the model and estimates of pumping from previous studies are discussed in General Response 4.3.7, Water Balance.

An appendix of Drillers Logs was not provided by the state due to the confidentiality of Driller Logs in the State of California. However, Figures 3-1C, 3-1D, 3-1E, and 3-1F of the Modeling Study do show the types of material found on driller logs.

As noted by the commenter, raw data for the aquifer tests were not presented in the Draft EIR/EIS. However, the raw data are shown graphically using the "Drawdown vs. Time with Discharge" method of analysis in Appendix A to the Modeling Study.

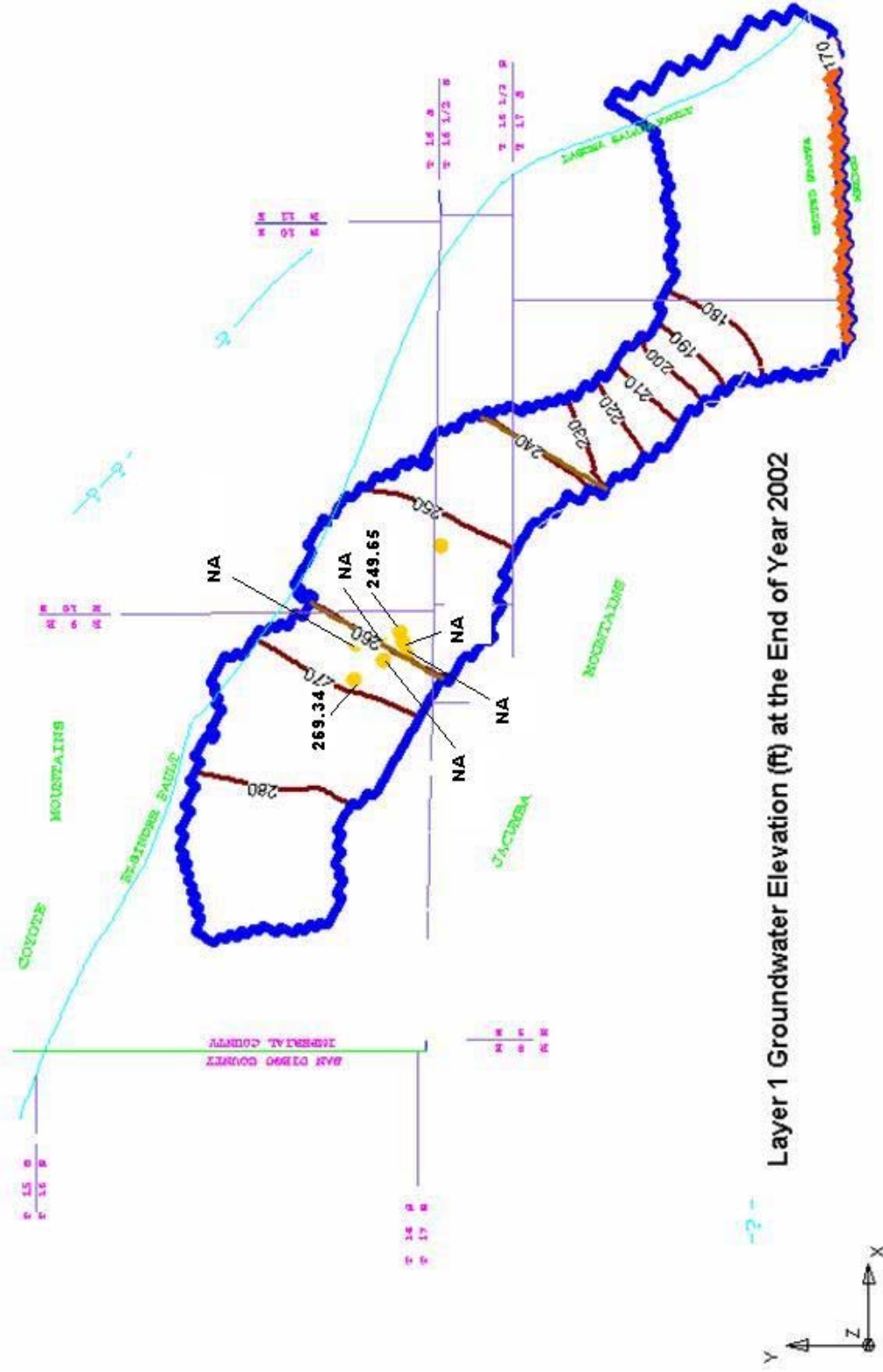
Comment 27-5:

Response: The Draft EIR/EIS draws on different sources for the information it presents. These sources generally do not use a consistent size map or always have the same scale. However, the information presented is correct and accurate.

Comment 27-6:

Response: See General Response 4.3.9

This comment requests clarification on the calibration statistics of the model and differences between the predicted water levels and the observed data. General Response 4.3.8, Application of the Numerical Model, discusses both of these concerns in details. The steps taken in calibration are described in detail in 4.3.9, Groundwater Model Calibration.



Layer 1 Groundwater Elevation (ft) at the End of Year 2002

Figure 5-10 Calibrated 2002 Layer 1 Groundwater Elevations

Comment 27-7:

Response: The volume of recharge in the model and recharge estimates for previous studies are compared in General Response 4.3.7, Water Balance. The general response also presents a graphical distribution of applied model recharge in AF/Yr. Figure 13 in Section 4.3.7 shows the recharge cells in the model Layer 1 and their recharge rate (ft per day).

Comment 27-8:

Response: This comment discusses the constant head boundary along the U.S./Mexico border, the differences in water levels near Ocotillo relative to the east, and recommendations for sensitivity analysis to be performed on the model. The outflow across the U.S./Mexico border is highly uncertain because of a lack of water level data in the area. The method used to estimate this in previous studies is discussed in General Response 4.3.7, Water Balance. In the numerical model, the constant head at this boundary was determined through calibration. The specific steps taken in calibration are discussed in General Response 4.3.9, Groundwater Model Calibration.

The model is a reasonable tool to predict future groundwater trends. See General Responses 4.3.8 and 4.3.9.

Comment 27-9:

Response: Comment noted. A solute transport model can predict the change in TDS concentration over time. However, the model would require data on the current and past vertical and horizontal distribution of TDS, which are not available at this time. Additional water quality monitoring will provide a better understanding of the current TDS distribution and detect any changes as they occur.

Comment 27-10:

Response: See General Response 4.3.4.

The Draft EIR/EIS addressed two alternatives utilizing Imperial Irrigation District (IID) water.

The potential alternative of drilling new production wells in the vicinity of the Plant was considered but rejected by the lead agencies as infeasible during the scoping process for the reasons discussed in the Draft EIR/EIS on pages 2.0-78 through 2.0-79. The conclusion that this alternative is infeasible is further supported by a letter to Jurg Heuberger, Planning Director, Imperial County Planning and Building Department dated August 23, 2004 entitled "U.S. Gypsum's Plaster City Test Well Pumping Tests". The letter states as follows:

“Aquifer pumping test results showed that the hydraulic conductivity of the aquifer was low (0.4 to 0.5 ft/day), and because the aquifer is relatively thin (less than 300 feet thick), a larger number of wells would be needed over a larger area to provide the quantity of water needed for US Gypsum’s operation. However, more significantly, water quality data from ATS Laboratories showed that sodium chloride concentrations in groundwater are much higher than is acceptable for use in the Plaster City Plant. Lab results show TDS of 9,678 mg/l and a specific conductivity of 13,700. Field specific conductivity measurements, which estimate the total dissolved solids, taken during the pumping tests remained high and generally unchanged to the end of the tests. Chloride is a problem with wall board construction. Lab results showed chloride concentrations to be 3,258 mg/l. Thus the consideration of the use of this water on a blending basis with other waters of lower salinity is impractical due to the excessive salinity of this water. Only a very small amount of this poor water could be used, if any.”

Comment 27-11:

Response:

The Draft EIR/EIS considers a range of potentially feasible alternatives to the Proposed Action that could accomplish most of the basic objectives of the Proposed Action and could avoid or substantially lessen the potential effects on groundwater resources.

Comment 27-12:

Response:

The Groundwater Monitoring Plan is presented in the Draft EIR/EIS on page 3.3-81 through 3.3-87. Mitigation Measures are discussed in Mitigation Measures 3.3-1 (pages 3.3-71 through 3.3-72) and 3.3-2 (pages 3.3-78 through 3.3- 79).

Specific wells are identified in Table 3.3-10.

Specific trigger points are discussed in Mitigation Measures 3.3-1 (pages 3.3-71 through 3.3-72) and 3.3-2 (pages 3.3-78 through 3.3- 79).

Comment 27-13:

Response:

The mitigation measures will be fully enforceable through permit conditions, agreements, or other legally-binding instruments.

Comment 27-14:

Response: See General Response 4.3.4.

Comment 27-15:

Response: See Response to Comment 27-10.

Comment 27-16:

Response: Both of these references were included by reference in Modeling Study. Groundwater quality is discussed in detail in Bookman-Edmonston (1996) which includes similar tables and maps as requested.

Water quality data and the spatial differences in chemical concentrations are clarified in General Response, 4.3.6, Hydrogeology and Groundwater.

Comment 27-17:

Response: Figure 3.3-7 has been corrected in Appendix A of the Final EIR/EIS.

Comment 27-18:

Response: See Response to Comment 27-5.

Comment 27-19:

Response: See General Responses 4.3.6 and 4.3.7

Comment noted. There is some uncertainty concerning the pumping rate of all wells in the Basin prior to 1981. Since 1981, the pumping from USG wells has been metered. These pumping rates are presented in the Draft EIR/EIS. See General Response 4.3.7, Water Balance for more discussion on the pumping rates used in the numerical model.

Comment 27-20:

Response: Groundwater level and quality monitoring wells are discussed in more detail in the 1996 Bookman-Edmonston report (Section 5 – Hydrologic Conditions). In General Response 4.3.6, Hydrogeology and Groundwater, water level data and water quality is further clarified.

Comment 27-21:

Response: See Response to Comment 27-2 and General Response 4.3.6

General Response 4.3.6, Hydrogeology and Groundwater, examines the available recent data from the USGS National Water Information System (NWIS) and includes hydrographs for key wells in the Basin. Specific focus is placed on available water level data in the area described in previous conceptualization as a fault zone, but now considered as a geologic contact.

Groundwater elevation trends under existing conditions are shown by actual field data in Figures 5-13 through 5-27 of the Bookman-Edmonston 2004 Modeling Study. Discussion of the potential for saline water intrusion into the alluvial aquifer is discussed in General Response 4.3.6.

Comment 27-22:

Response: Hydraulic gradients are generally calculated using observed field data. However, the lack of data on both sides of the border, the large distances between observed points, and the generally low gradient significantly reduce the accuracy of gradients estimated using field data. The purpose of the Draft EIR/EIS is to give a general estimate of the hydraulic gradients in the Basin and as such the gradient determined from simulated contours is a reasonable estimate.

The comment on effective porosity is noted. The Draft EIR/EIS does use a higher effective porosity than does the groundwater model. However, the Draft EIR/EIS is only attempting to offer another method to estimate the recharge and outflow of the Basin.

Comment 27-23:

Response: See General Response 4.3.6

General Response 4.3.6, Hydrogeology and Groundwater, clarifies the response to water levels from precipitation. Because of the length of time between precipitation and recharge, inflow into the Basin from recharge is fairly constant. This can be seen in the lack of response in the groundwater levels during periods of high precipitation and also low precipitation.

Comment 27-24:

Response: See General Response 4.3.6

The commenter has noted that Basin wide water levels continue to decline although pumping has decreased over the past 30 years. This Basin wide characterization groups together the Ocotillo with the Yuha Estates areas, which are located in different parts of the Basin and in different geologic formations. Hydrographs for these areas are presented in the EIR in Figures 3.3-9 and 3.3-10 for the Ocotillo area and Yuha Estates, respectively. Water

level trends are also discussed in the General Response 4.3.6, Hydrogeology and Groundwater.

While water levels near the community of Ocotillo have continued to decline, water levels near Yuha Estates show a slight increasing trend. The wells operated by USG are the largest producers of groundwater in the Ocotillo area. Since 1981, when meters were installed on the USG wells, pumping has remained fairly constant (around 450 AF/Yr). Pumping in the USG wells decreased slightly in the mid 1990's (to around 350 AF/Yr) and increased in 2002 (to around 533 AF/Yr). This continued pumping can be seen in the decline in water levels in the Ocotillo area. Pumping in the Yuha Estates area increased sharply when water was exported to Mexico (pumping was doubled). Since export to Mexico was suspended in the early 1980's, water levels in the Yuha Estates area continue to recover. The water levels in these two areas show different trends, as they are in different geologic formations and the trends in pumping are also different.

Comment 27-25:

Response: See General Response 4.3.6.

The commenter highlights the importance of understanding the geologic framework in the area previously referred to as the fault zone. As clarified in General Response 4.3.6, Hydrogeology and Groundwater, this area is now understood to be the contact of two geologic formations (the alluvium and the Palm Springs and Imperial). The numerical model indicates that groundwater declines will continue in the Layer 1 alluvium near Ocotillo (Well 29L1) and in the Layer 2 Palm Springs and Imperial formations east of the Ocotillo (Well 29H1). The flow direction will continue west to east as long as the water levels in the alluvium are greater than water levels in the Palm Springs and Imperial formations. Flow patterns are expected to continue from west to east as indicated in Figures 6-11 and 6-12 of the Modeling Study. However, because of this and other uncertainty associated with the Proposed Action, the Draft EIR/EIS has provided the Groundwater Monitoring Plan on page 3.3-81 through 3.3-87, and Mitigation Measures 3.3-1 (pages 3.3-71 through 3.3-72) and 3.3-2 (pages 3.3-78 through 3.3-79). This plan will allow USG to detect any changes in water quality trends as they occur.

Comment 27-26:

Response: See General Response 4.3.6 for discussion of Basin impacts. The impact of increased pumping on individual wells (Impact 3.3-1) and the impact on the Basin in general (Impact 3.3-2) are treated separately in the Draft EIR/EIS and therefore each impact's level of significance is evaluated separately. The commenter is correct that a significant impact occurs when a production rate of pre-existing nearby wells would drop to a level that would not support

existing land uses or planned uses for which a permit has been granted. Mitigation Measure as modified, 3.3-1 on pages 3.3-71 through 3.3-72 addresses this impact.

Comment 27-27:

Response: Included in the Groundwater Monitoring Program on page 3.3-18 of the Draft EIR/EIS is a list of proposed wells and two new nested monitoring wells to be used as sentry wells to observe changes in water quality and drawdown. Water level and water quality change triggers are discussed in Sections 3.3-1 and 3.3-2 of the Draft EIR/EIS. These triggers were designed to mitigate potential adverse impacts by the proposed Project. The basis for the water quality trigger points is by comparison of actual water quality with historical trends. Specific water level triggers are specified in the Draft EIR/EIS. See also General Response 4.3.8 for the role of the numerical model in the monitoring program.

Comment 27-28:

Response: Water level trends, both observed through field data and simulated using the numerical model, are discussed in General Response 4.3.6, Hydrogeology and Groundwater.

Comment 27-29:

Response: Several figures were provided by the USGS to show an overview of the distribution of current and historic wells that were measured for water level or sampled for water quality. These wells are listed in Appendix B1 after the figures. More accurate and clearer maps showing these wells can be found in the Modeling Study (Plate 1) or in the Draft EIR/EIS (Figure 3.3-4).

Comment 27-30:

Response: See Response to Comment 27-4 and General Response 4.3.6.

Well location maps for wells currently monitored by the USGS (for water levels and water quality) are included in General Response 4.3.6, Hydrogeology and Water Quality. An appendix of Driller's Logs was not provided due to the confidentiality of Driller's Logs in the State of California. However, well inventory tables, maps, and detailed analysis of the groundwater information are presented in previous reports including Bookman-Edmonston 1996.

Comment 27-31:

Response: See Responses to Comment 27-16, 27-30 and General Response 4.3.6.

The groundwater quality near the community of Ocotillo and the groundwater quality to the east are significantly different, as discussed in General Response 4.3.6. These differences are the result of the different geologic formations. If groundwater gradients were to change significantly over time, lower quality water could flow westward. This interaction is discussed further in General Response 4.3.6. While the event of density driven groundwater flow is unlikely, this possibility is considered. As discussed in the Draft EIR/EIS, the monitoring plan will identify adverse water quality trends if any. While Basin impacts are not mitigated, mitigation measures are provided for impacts on individual wells.

Comment 27-32:

Response: See General Response 4.3.9 regarding USGS review of the numerical model. Peter Martin with the USGS reviewed and commented on the proposed monitoring program presented in the Draft EIR/EIS. His comments were included in the Monitoring Plan presented in the Draft EIR/EIS. Additional comments have also been provided by Peter Martin in a response letter to the Draft EIR/EIS.

Comment 27-33:

Response: Well logs and static groundwater levels indicate that the aquifer is unconfined (see Figures 3-1A through 3-1F). However, the aquifers are not homogeneous and local clay layers may create areas where semi-confined or confined aquifers are present. Due to lack of data, the existence and/or extent of semi-confined or confined conditions are highly uncertain. The Draft EIR/EIS provides a Groundwater Monitoring Plan (page 3.3-81 through 3.3-87), and Mitigation Measures 3.3-1 (pages 3.3-71 through 3.3-72) and 3.3-2 (pages 3.3-78 through 3.3-79). See also General Response 4.3.9.

Comment 27-34:

Response: See General Response 4.3.11.

The proposed Project impacts to land use and planning issues are addressed in Volume I, Section 3.9, Land Use of the Draft EIR/EIS. Water resources are addressed in Volume I, Section 3.3, Hydrology and Water Quality of the Draft EIR/EIS. The Ocotillo/Nomirage Community Area Plan (ONCAP) is an area plan supplement to the Imperial County General Plan. It was adopted in April, 1994, superseding and replacing the “current land use plan for the Yuha Desert Planning Unit” adopted in 1973.

Comment 27-35:

Response: A section addressing the existing water wells and information such as perforation intervals, depth, surface elevation, and well log availability is presented in Bookman-Edmonston (1996) Appendix A as referenced in the Draft EIR/EIS. USG's State Well and production well numbers were also provided in Appendix A and are as follows:

USG No. 6 - 16S09E36B001

USG No. 5 - 16S09E36H001

USG No. 4 - 16S09E36G003

OMWC No. 2 - 16S09E25M001

OMWC No. 3 - 16S09E25M002

CVMWC No. 2 - 16S09E36C002

CVMWC No. 3 - 16S09E36C003

USG Wells No. 1, No. 2, No. 3 and original No. 6 were abandoned due to age and not to any changes in groundwater elevation or quality.

Comment 27-36:

Response: See General Responses 4.3.6, 4.3.7, 4.3.8, and 4.3.9. Comment noted in agreement. The Basin outflow across the U.S./Mexico border is uncertain due to lack of water level data on both sides of the boundary. The available water level data are discussed in General Response 4.3.6, Hydrogeology and Groundwater. The estimates made in previous studies and how the boundary was simulated in the model is clarified in General Response 4.3.7, Water Balance. The effect of the boundary as simulated is discussed in 4.3.8, Application of the Numerical Model. For more detail on how the constant head cells in this area were calibrated, refer to 4.3.9, summarizing the numerical model calibration methodology.

As discussed in General Response 4.3.8, the model is a reasonable tool to predict water levels in the Basin.

Comment 27-37:

Response: Layer 2 was not assigned a horizontal hydraulic value of 15 feet a day.

Comment 27-38:

Response: See Response to Comment 27-19 and General Response 4.3.7. Historical groundwater pumping is discussed in detail in General Response 4.3.7 summarizing the water balance.

Comment 27-39:

Response: See Response to Comment 27-7 and General Responses 4.3.7 and 4.3.8.

Recharge estimates, their reasonableness and their distribution in the model, are discussed in 4.3.7, Water Balance.

Comment 27-40:

Response: See Responses to Comments 27-7, 27-45, and General Responses 4.3.7 and 4.3.9.

Recharge and outflow estimates simulated in the model are discussed in General Response 4.3.7, Water Balance. In conjunction with Bookman-Edmonston used during model calibration is discussed in 4.3.9.

Comment 27-41:

Response: See Responses to Comments 27-1, 27-6, 27-7 and General Responses 4.3.8 and 4.3.9. Clarification on the calibration statistics is found in General Response 4.3.8, Application of the Numerical Model. The details of calibration are discussed in 4.3.9, Calibration.

Comment 27-42:

Response: See Responses to Comments 27-1, 27-9, and General Responses 4.3.8 and 4.3.9. Calibration and model residuals are clarified in 4.3.8, Application of the Numerical Model and 4.3.9, Calibration.

Comment 27-43:

Response: See Response to Comment 27-1 and General Responses 4.3.8 and 4.3.9.

The adequacy of calibration in Layer 1 and Layer 2 in the model is discussed in 4.3.8, Application of the Numerical Model.

The unique geology in the Yuha Estates area explains large initial drawdowns (i.e. Well 11G1 from about 1978 to 1982), their initial rapid recovery (approximately 1982 to 1985), and their subsequent slower recovery (post 1985). These trends appear to represent initial effects to a thin layer of alluvium (Layer 1), a rapid drawdown associated with the Palm Springs and Imperial formations (Layer 2), a subsequent initial fast recovery (recovery within the Palm Springs and Imperial formation) and then a slower recovery (recovery within the alluvium - Layer 1). In order to calibrate to the wells in the Yuha Estates area using this geologic interpretation, the hydraulic conductivity of Layer 2 in the model had to be made low (0.3 ft/day), partly

due to the thickness of Layer 2 used in the model (500 feet). More discussion of the calibration of Yuha Estates can be found in General Response 4.3.9, Calibration.

Comment 27-44:

Response: See Responses to Comments 27-1, 27-31, 27-33, 27-36, 27-43, 27-45 and General Responses 4.3.6, 4.3.7, 4.3.8, and 4.3.9.

The groundwater outflow across the U.S./Mexico border is highly uncertain. The available water level data are discussed in General Response 4.3.6, Hydrogeology and Groundwater. The estimates made in previous studies and how the boundary was simulated in the model are clarified in General Response 4.3.7, Water Balance. The effect of the boundary as simulated is discussed in 4.3.8, Application of the Numerical Model. For more detail on how the constant head cells in this area were calibrated, refer to 4.3.9.

The commenter highlights the difference between simulated and observed water levels in the McDougal Well (25K2) in the Ocotillo area. As discussed in General Response 4.3.8, Application of the Numerical Model, this well is a pumping well and the observed water levels at this well may not reflect the regional static groundwater conditions.

Comment 27-45:

Response: See Response to Comment 27-1 and General Responses 4.3.7, 4.3.8 and 4.3.9. Previous water balance estimates of the outflow across the U.S./Mexico boundary are discussed in General Response 4.3.7, Water Balance. Southern boundary flux is the function of the hydraulic conductivity and gradient around the boundary area. In this model, all fluxes along the “constant head” boundaries are outward flow. Therefore, for a long term water balance, the southern boundary flux is only a function of recharge values. It should be noted that both Huntley’s (1979) inflow and outflow are higher than the recharge used in this study.

Comment 27-46:

Response: See Response to Comment 27-36 and General Responses 4.3.8 and 4.3.9. With regard to the capabilities of the model, the calibration is strongest in Layer 1 in the area of the USG wells near Ocotillo.

Comment 27-47:

Response: See Responses to Comments 27-1, 27-33 and General Response 4.3.8.

Comment noted with agreement. General Response 4.3.8, Application of the Numerical Model, discusses the adequacy of the model to predict impacts due to the proposed project. The model is a reasonable tool to assess long term water level trends in the Basin.

Comment 27-48:

Response: See General Responses 4.3.6, 4.3.7, and 4.3.8. Comment noted. The model files and supporting data were provided to Todd Engineers for an independent review of the model (see Appendix C in the Final EIR/EIS). This review is documented in General Responses 4.3.6, 4.3.7, and 4.3.8.

Comment 27-49:

Response: See Responses to Comments 27-1, 27-2, 27-4, 27-30, and General Responses 4.3.6, 4.3.7, 4.3.8, and 4.3.9.

The commenter's opinions concerning the adequacy of the Draft EIR/EIS are noted. However, disagreement among experts does not make an EIR/EIS inadequate. In this case, all reasonably feasible efforts have been made to evaluate the potential impacts of the Proposed Action on groundwater resources, and the Final EIR/EIS represents an adequate, complete, and good faith effort at full disclosure of all such potential impacts.

General Response 4.3.6, Hydrogeology and Water Balance, clarifies and documents available hydrogeologic data.

Comment 27-50:

Response: The Draft EIR/EIS provides a Groundwater Monitoring Plan (page 3.3-81 through 3.3-87), and Mitigation Measures 3.3-1 (pages 3.3-71 through 3.3-72) and 3.3-2 (pages 3.3-78 through 3.3-79).

Comment 27-51:

Response: See Response to Comment 27-1, and General Responses 4.3.7, 4.3.8 and 4.3.9.

Calibration and understanding of the constant head boundary is discussed in General Responses 4.3.7, Water Balance, and 4.3.8, Application of the Numerical Model, and 4.3.9, Calibration.

Comment 27-52:

Response: See Response to Comment 27-1 and General Response 4.3.8.

Comment noted with agreement. General response 4.3.8, Application of the Numerical Model, discusses the adequacy of the model to predict impacts due to the proposed Project. The model is a reasonable tool to assess long term water level trends in the Basin. These improvements include sensitivity assessments to understand the reasonable ranges of certain parameters and their effect on the simulate outcome

Comment 27-53:

Response: See Response to Comment 27-1, 27-3, and 27-9.

Comment 27-54:

Response: See Responses to Comments 27-1 and 27-12.

The Draft EIR/EIS provides a Groundwater Monitoring Plan (page 3.3-81 through 3.3-87), and Mitigation Measures 3.3-1 (pages 3.3-71 through 3.3-72) and 3.3-2 (pages 3.3-78 through 3.3- 79).

Letter 28

July 16, 2006

VIA FAX # 760-353-8338 & US MAIL
(Via e-mail minus attachments)

Jurg Heuberger, Director
Planning & Development Services Director
Imperial County
801 Main Street
El Centro, CA 92243

RECEIVED

JUL 18 2006

IMPERIAL COUNTY

RE: US GYPSUM EIR/EIS STATE CLEARING HOUSE NO. 2001121133

Dear Mr. Hueberger,

Thank you for extending the previous comment deadline. Unfortunately, there is so much wrong with the US Gypsum (USG) expansion project itself and the EIR/EIS document that it is hard to know where to start. Including the fact that most, if not all, of the expansion was already approved by Imperial County and built by USG while litigation was pending. The document is flawed and inadequate to the degree that it should be revised and recirculated for review and comment. It fails to disclose relevant facts and new documented information regarding the IID water supply alternative.

My intention to draft and submit extensive comments last week was derailed by the death of my father, Don Cox, and the resulting family obligations. These much abbreviated comments are being submitted to meet the July 17th deadline. You may know that during his 12 years as an Imperial Irrigation District Director my father fought long and hard for the water rights of Imperial Valley. He also sat on the Colorado River Regional Water Board. I share his passion for water protection but mine has been focused primarily on fragile groundwater resources. Therefore, my limited comments will be focused mainly on groundwater at this time. While not a professional, I have dealt closely with geologists and hydrogeologists over the last two decades while fighting off the proposed 600 acre Campo Landfill and other poorly advised major development in our groundwater dependent area. I chair a non-profit group called Backcountry Against Dumps and have also chaired the Boulevard Sponsor Group (community planning) for the last fifteen years. These are my personal comments.

A decade ago I helped community members from Ocotillo, Coyote Wells, and No Mirage get federal designation for their sole source aquifer. They came to me for help after I was successful in getting a similar designation for our Campo/Cottonwood Creek Aquifer in Eastern San Diego County. Despite his illness, my father was very interested in my efforts and provided much advice in the area of groundwater protection. When asked, he recommended contacts within the Imperial Irrigation District (IID) and the Regional Water Quality Control Board (RWQCB) who might be able to provide me with information on the USG project. My research led me to the following new information:

- **April 4, 2006, the IID Board of Directors passed and adopted Resolution No. 8-2006 (exhibit 1) to allow IID to include US Gypsum property within the IID service area to provide up to 1,000 acre feet/year of Colorado River Water.** When I spoke to Michael King, Water Department Manager at IID, in early June, he seemed shocked that their agreement with USG was not included in the EIR/EIS. Expressing dismay that the IID alternative was omitted, and therefore not being recommended, he stated that they had worked on it for 6-7 months. King also informed me that no farm land would be fallowed for the USG project as the water for the agreement would become available through conservation efforts. Owning Imperial Valley farm land, this was an important issue for me.

28-1

1 of 5

- IID documents state that USG is to “execute and deliver to LAFCO...the IID Resolution for consideration.” Yet, according to Imperial County staffer Rosa Soto, LAFCO has failed to even place the IID/USG inclusion agreement on the agenda. I was told to check back in September (exhibit B). It is my understanding that you, Mr. Heuberger, are the head of LAFCO. What is the delay in seeking LAFCO approval? Is that delay based in your department or with USG? 28-2
- The IID/USG agreement specifies that USG will pay industrial rate charges for water. That rate is five times the Schedule No. 1 rate of \$17.00 per acre-foot which works out to \$85.00 per acre-foot (Exhibit C). This is a good deal as it is mere fraction of what San Diego is being charged in the IID water transfer agreement. 28-3
- The California Regional Water Quality Control Board Colorado River Basin Region (RWQCB) was previously unaware of the IID Resolution No. 8-2006 and also failed to draft comments on the USG EIR/EIS document, or take any official action. After recently reading the above IID resolution, the Assistant Executive Officer Jose Angel, wrote to me (7-14-06)(exhibit D), that “*the CEQA Lead Agency (Imperial County) and the proponent must pursue this option as a viable alternative under CEQA and do the necessary CEQA analyses, rather than stating in the EIR/EIS that it is “unknown” whether an agreement can be secured because of current litigation...*” and that he would “*...recommend the Regional Board use any and all of its available powers to protect the area’s groundwater resources for current and future generations.*” 28-4

Mr. Angel indicated to me that he was unhappy that the RWCQB staff had not taken previous action on this project to protect the beneficial uses of the impacted Ocotillo/Coyote Wells aquifer from overdraft or degradation. It is my objective that the RWQCB will now become *officially* involved.

Groundwater concerns not adequately addressed in the EIR/EIS include but are not limited to:

- The EIR/EIS contains inadequate information, outdated data, and lacks updated or recent data, which makes it difficult for reviewers to understand the full scope of the project and its cumulative impacts. 28-5
- The jeopardizing of both short and long-term water quality and quantity by doubling the historic groundwater removal, as recognized by the Court, from three closely spaced USG wells in the vicinity of residential users with no access to any other economically viable water supply. 28-6
- Lack of adequate aquifer recharge to off-set increased USG pumping, or even previous rate of pumping. 28-7
- Unknown impacts of now scientifically recognized global warming on regional rainfall/recharge, especially in Southwest desert areas where scarce groundwater is a priceless commodity. Reliance on this scarce commodity, especially for 80 years, is speculative at best. 28-8
- Transporting high quality potable water over 8 miles, via a vulnerable pipeline, across documented faults, from a fragile and reportedly overdrafted federally designated aquifer to be used for the *industrial* production of wall board in a completely separate groundwater basin when IID water is now documented as an available and viable alternative. 28-9

- Negative impacts have reportedly already occurred, such as draw down of aquifer levels and degradation of water quality, as evidenced by technical data. | 28-10
- Economic impacts to existing users in the event overdraft requires the drilling of deeper wells, water treatment due to degraded water quality, or having to pay for water that is trucked in (if available), and reduced property values based on these issues. Real estate law requires full disclosure of all problems related to a property prior to sale. Failure to properly or fully disclose can lead to litigation. | 28-11
- Failure to identify and document the availability of an alternate source of replacement water of equal quality and quantity for existing residents. This is a separate issue from the IID agreement to provide an alternate source to the USG property/expansion project. | 28-12
- Lack of legally enforceable monitoring and/or mitigation requirements | 28-13
- Lack of baseline standards on water quality or quantity by which to monitor and mitigate. | 28-14
- Threatened long-term viability of residential or other legally allowed uses due to overdraft impacted water quality and/or quantity, resulting from continued and/or increased USG pumping | 28-15
- There is too much wiggle room for USG to avoid the burden and economic responsibility to pay for the consequences of their greedy water hogging actions on the aquifer and those reliant on it, including wildlife and habitat. Residents will most likely have to bear the economic burden of finding replacement water while USG forces them to prove negative impacts are their responsibility. Any litigation could drag out for years—at the expense of a mostly low income community. | 28-16
- Lack of identification, discussion, or analyses, of other potential conservation or recycling, or avoidance methods to reduce the amount of water needed for production of wallboard. | 28-17
- Negative impacts on springs and seeps from quarry expansion and increased water withdrawal in a critical wildlife habitat. It is not like there are a lot of alternative locations to access water in this extreme environment. Dependent wildlife and habitat have no ability to defend themselves in this event. | 28-18
- Negative impacts on the recharge to springs and seeps in the area caused by altering quarry area stream channel and subsurface flow. | 28-19
- Impacts on water quality by potential waste discharge from mining and industrial activities. | 28-20
- Impacts on storage capacity of the aquifer due to removal of massive amounts gypsum and sand via mining operations within the impacted basins. Remove the storage medium (gypsum and sand) and the storage capacity is thereby reduced. | 28-21

Planning concerns:

- Project is in violation of the NOCAP community plan and California law. It fails to provide the required water study for a project of this size and scope. | 28-22

- The NOCAP community plan is also outdated and should be updated as required by state law. | 28-23
- Approved expansion of the proposed project could impact the viability of any new future development in the area due to lack of water availability. Are those other property owners supposed to just walk away with nothing? | 28-24

Impacts to wildlife and habitat:

- Negative impacts to the Critical Habitat for the endangered peninsular big horn sheep appear to have been dismissed. Though not made clear by this flawed document (inadequate mapping), the quarry area is right there and this huge expansion will have definite impacts regarding their survival in the area. If forced out due to increased activities, where are they to go? | 28-25
- Negative impacts to the San Sebastian Marsh and San Felipe Creek areas were dismissed as insignificant. Perhaps a trip to the locale would provide evidence that these environments are rare in our desert setting and therefore unique and worthy of full protection by our government agencies—as required by law. I defer to other commenters with more expertise in this area. | 28-26

Air Quality impacts:

- As a property owner and frequent visitor to the Imperial Valley, where I was born and raised, the degradation of air quality is stark. Several decades ago the air quality was much better. It was easier to breath. Imperial Valley reportedly has one of the highest per capita rates of asthma. Any increased mining and production activities, as represented by this project, that lead to air quality degradation and an increase in respiratory ailments is significant. | 28-27
- The EIR/EIS fails to identify and address the cumulative air quality impacts of their own increased activities combined with the adjacent and heavily used off-road activity area, along with the increased sand mining, to the east and west of the USG production plant, and the related massive increase in trucking activities to haul the sand to market. | 28-28
- At times, the plumes of dust generated at the sand operations and the off-road area are visible from great distances. Plumes are also visible from the USG production plant. | 28-29
- A trip on Old Hwy 80 (Evan Hews) through Plaster City shows evidence of a chalky white substance blanketing the area. It had to travel through the air. In days gone by my siblings and I were spooked by the ghost-like appearance of the chalk covered employees and production area. It was down right creepy. It doesn't look much different today. | 28-30
- Health related impacts of increased project related activities should be identified, analyzed and evaluated—not guessed at or dismissed as insignificant. | 28-31

Traffic impacts:

- My frequent trips to Brawley and San Diego from Boulevard via I-8 and Old Hwy 80 make evident the vastly increased trucking activities associated with sand mining both to the east and the west of USG's Plaster City. The traffic is almost non-stop in both directions. These cumulative impacts are not addressed in the EIR/EIS for this project. | 28-32

Conclusion:

- This document is inadequate under both CEQA and NEPA. | 28-33
- This EIR/EIS should be revised and recirculated for review and comment. | 28-34
- It fails to properly identify, analyze, monitor, mitigate, or fully disclose impacts or alternatives to the proposed expansion project, leaving reviewers, including government and other entities, unable to make balanced and fully informed decisions. | 28-35
- It fails to include specific legally enforceable mitigation measures. | 28-36
- The fact that Imperial County placed the cart before the horse by permitting increased activities/expansion of this project, while litigation was pending, greatly exacerbates the shortcomings of this flawed and inadequate draft EIR/EIS. | 28-37
- New information exists regarding the approved and adopted April 4, 2006 IID Resolution 8-2006 agreement to provide up to 1,000 acre feet per year of conserved Colorado River water to US Gypsum. This information alone requires recirculation of the document. | 28-38
- There are concerns regarding the perceived dereliction/abdication of duty on the part of both Imperial County and the BLM to protect the finite and valuable desert resources put at risk by this project and its expansion. Especially in regards to the potential overdraft and degradation of a vulnerable high quality potable water supply. | 28-39

It is my personal opinion that corporate and government responsibilities and professional ethics are not well represented by past actions or this very deficient document. The Public good demands less more corporate conservation and less greed along with better representation and treatment by our government. Please add my name to the list of interested parties to be notified on all aspects of this project.

Sincerely,



Donna Tisdale
619-766-4170
donnatisdale@huhges.net
P.O. Box 1275
Boulevard, CA 91905

22 pages of Attachments (Ex 1-4)

IMPERIAL IRRIGATION DISTRICT
BOARD AGENDA MEMORANDUM

TO: Board of Directors
FROM: General Manager
SUBJ: Resolution of the Imperial Irrigation District Making Application to the Imperial County Local Agency Formation Commission, Requesting LAFCO to Initiate Proceedings to Include Specified Property for Purposes of Receiving Water
DATE: April 4, 2006
DEPT: Water

WD 

Action Requested:

Staff requests that the Board approve the attached *Resolution of the Imperial Irrigation District (IID) Making Application to the Imperial County Local Agency Formation Commission (LAFCO), Requesting LAFCO to Initiate Proceedings to Include Specified Property for Purposes of Receiving Water.*

Background:

United States Gypsum Company (USG) representatives and IID staff have been discussing a potential partnership to provide water to its Plaster City Plant. USG has filed a Petition for Inclusion with the IID for delivery of not-to-exceed 1,000 acre-feet per year of water from the IID for use exclusively on the Property owned by USG.

USG will execute and deliver to LAFCO an application and the attached IID Resolution for consideration.

Financial Impact:

Water to be delivered to USG will be billed at the general industrial rate.

Recommendation:

Staff recommends the Board adopt the attached resolution.

**IMPERIAL IRRIGATION DISTRICT
RESOLUTION NO. 8-2006**

**RESOLUTION OF THE IMPERIAL IRRIGATION DISTRICT
MAKING APPLICATION TO THE
IMPERIAL COUNTY LOCAL AGENCY FORMATION COMMISSION,
REQUESTING LAFCO TO INITIATE PROCEEDINGS
TO INCLUDE SPECIFIED PROPERTY
FOR PURPOSES OF RECEIVING WATER**

WHEREAS, Imperial Irrigation District ("IID") is an irrigation district duly formed pursuant to the irrigation district law set forth at California Water Code sections 20500, et seq.; and,

WHEREAS, United States Gypsum Company ("USG") has filed a "Petition for Inclusion" with IID, a copy of which is attached hereto as Exhibit "A" ("Petition"); and

WHEREAS, USG is the owner of property, including property described in the attached Exhibit "B" ("Property"); and,

WHEREAS, the Property is depicted on Exhibit "C"; and,

WHEREAS, the Property is part of the area which could be included within the boundaries of the IID under the All-American Canal Contract dated December 1, 1932; and,

WHEREAS, USG wishes to have the Property made a part of such unit as may be designated by IID and IID is amenable to including the Property; and,

WHEREAS, the purpose of the inclusion is to provide for delivery of not to exceed 1,000 acre feet per year of water from IID for use exclusively on the Property and in accordance with all applicable rules, rates and regulations now hereafter adopted or amended; and,

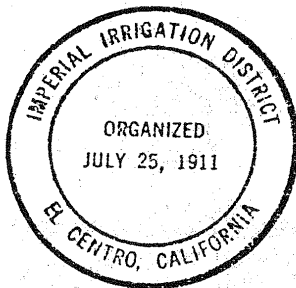
WHEREAS, USG shall be responsible for installation and extension of facilities to deliver and measure water use from the Westside Main Canal to the Property; and,

WHEREAS, USG is prepared to execute and deliver to the Imperial County Local Agency Formation Commission ("LAFCO") an application in a form attached hereto as Exhibit "D" and makes this proposal pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (California Government Code Sections 56000, et seq.) ("Act").


NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

1. The recitals are true and correct and are incorporated herein by this reference.
2. This Resolution of Application is hereby adopted and approved by the Board of Directors of the Imperial Irrigation District, and LAFCO is hereby requested to take such action as may be necessary to grant the USG application for inclusion pursuant to the Act.
3. The General Manager is designated as the officer referred in Government Code section 56652(f) to receive the LAFCO report and mailed notice of hearing.

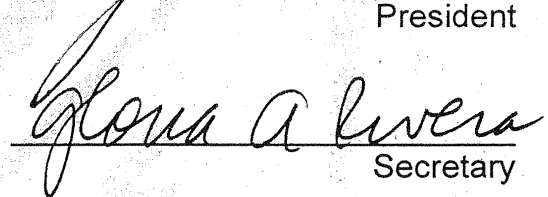
PASSED AND ADOPTED this 4th day of April, 2006.



IMPERIAL IRRIGATION DISTRICT



President



Secretary

EXHIBIT A

PETITION FOR INCLUSION

TO THE BOARD OF DIRECTORS OF IMPERIAL IRRIGATION DISTRICT:

The undersigned petitioner respectfully alleges and shows:

1. That he is the holder of title, or evidence of title, of that certain tract of land situated in the County of Imperial, State of California, and particularly described as follows, to wit:

United States Gypsum Company
3810 West Evan Hewes Highway
Plaster City, CA 92243

Legal Description:
COC PM2313 N2 OF S2 SEC8 16-11
S2 OF NE4 & E2 OF NW4 SEC8 16-11

2. That said tract of land is a part of and within the areas to be included within the boundaries of Imperial Irrigation District under the All-American Canal contract dated December 1, 1932, between the United States and Imperial Irrigation District, as shown on exhibit "A" attached to and made a part of said contract and indicated thereon as "Boundary of Additional Areas in Proposed Enlarged Imperial Irrigation District."

3. That said tract of land will be benefited by its inclusion within Imperial Irrigation District and it will be for the best interests of the District that said land be included therein.

4. That inclusion of said tract of land shall be under and in accordance with all of the terms and conditions of said All-American Canal contract of December 1, 1932, and said petitioner agrees that said tract of land shall be included within such unit of Imperial Irrigation District as may be designated by the Board of Directors of said District, and in addition to the conditions of said All-American Canal contract, if said land is included within the District, it shall be liable by assessment or otherwise for existing and future obligations of the District and shall be subject to any other conditions which the Board may consider proper.

5. Wherefore, petitioner prays that said tract of land, and the whole thereof, be included within the boundaries of Imperial Irrigation District in the manner and under the terms and conditions specified in said All-American Canal contract.

DATED this 01 day of November, 2004

[Handwritten signature of Nicholas M Latkovic]

STATE OF CALIFORNIA, }
COUNTY OF Imperial } SS

On this 01 day of November, 2004 before me Verdie Ann Brown, a Notary Public in and for the County of Imperial, State of California, residing therein duly commissioned and sworn personally appeared Nicholas M Latkovic

known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same.

VERDIE ANN BROWN
COMM. #1345477
NOTARY PUBLIC-CALIFORNIA
IMPERIAL COUNTY
My Comm. Expires March 2, 2006

[Handwritten signature of Verdie Ann Brown]
Notary Public in and for said County and State

EXHIBIT B

Parcel 1:

North one-half of South one-half of Section 8, Township 16 South, Range 11 East, S.B.M.; also being a portion of a certificate of compliance of Parcel Map No. 2313, recorded in Book 2061, page 600 of Parcel Maps on file in the office of the Imperial County Recorder. APN: 034-360-9101

Parcel 2:

South one-half of northeast quarter of Section 8, Township 16 South, Range 11 East, S.B.M. APN: 034-360-6901

Parcel 3:

East one-half of Northwest quarter of Section 8, Township 16 South, Range 11 East, S.B.M. APN: 034-360-6901

EXHIBIT C

34-36

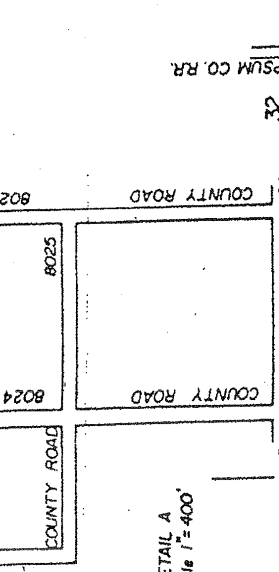
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SEC. 1 TO 18 INCL., T. 16S., R. 11E.

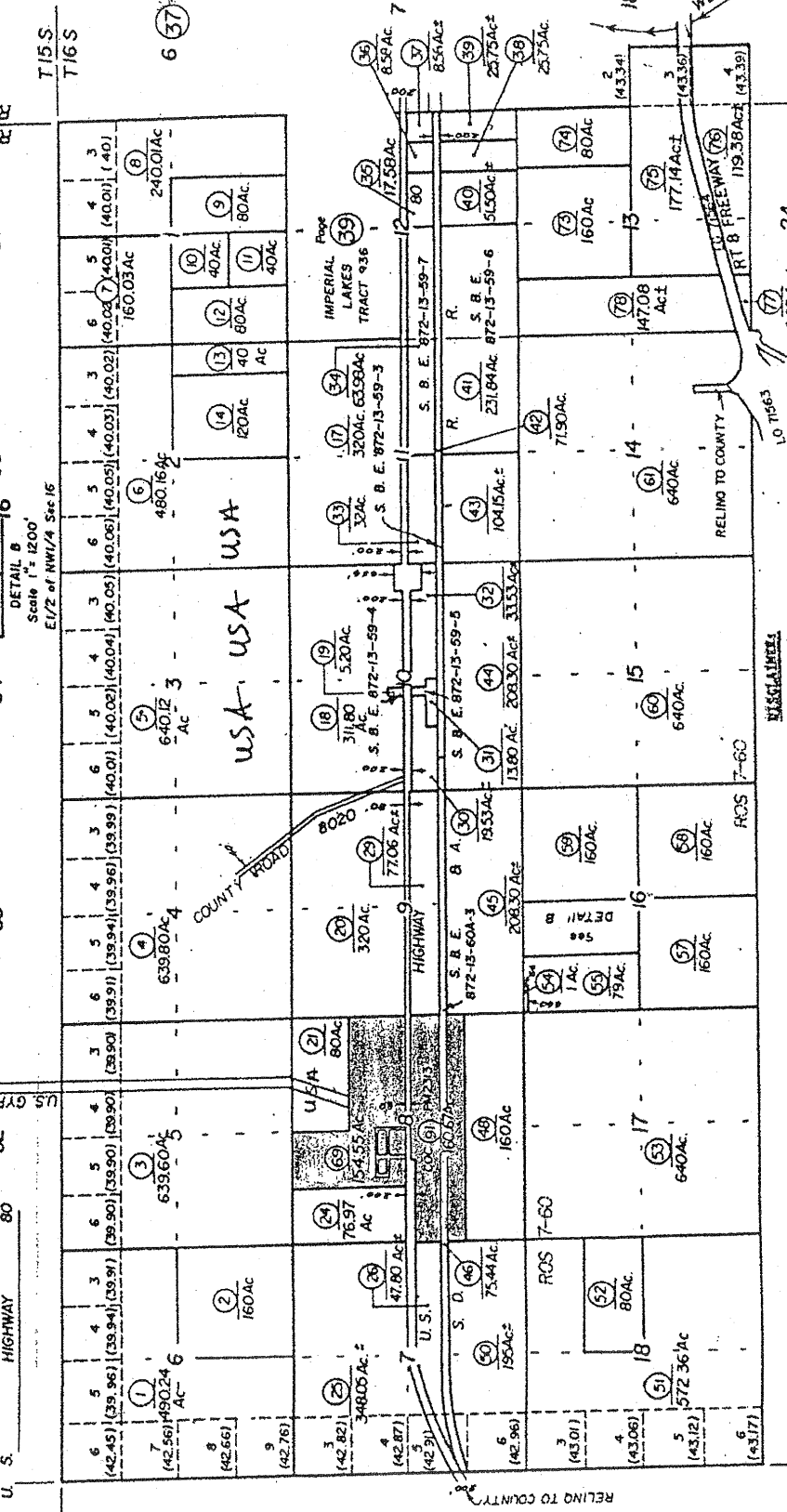
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(63) IOAC	(64) IOAC
(66) IOAC	(65) IOAC

DETAIL B
Scale 1" = 1200'
E 1/2 of NW 1/4 Sec 16

DETAIL A
Scale 1" = 400'



January 21, 2008



Assessor's Map Bk 34- Pg. 36
County of Imperial, Calif.

THIS MAP WAS CREATED FOR THE IMPERIAL COUNTY ASSESSOR FOR THE SOLE PURPOSE OF AIDING IN THE PERFORMANCE OF THE DUTIES OF THE ASSESSOR. ANY ERRORS OR OMISSIONS IN THIS MAP ARE NOT THE RESPONSIBILITY OF THE COUNTY OF IMPERIAL.

NOTE: Assessor's Parcel Numbers Shown in Circles.

REMARKS: THIS IS NOT AN OFFICIAL MAP. THIS MAP WAS CREATED FOR THE IMPERIAL COUNTY ASSESSOR FOR THE SOLE PURPOSE OF AIDING IN THE PERFORMANCE OF THE DUTIES OF THE ASSESSOR. ANY ERRORS OR OMISSIONS IN THIS MAP ARE NOT THE RESPONSIBILITY OF THE COUNTY OF IMPERIAL.

NOTE: Assessor's Parcel Numbers Shown in Circles.

U.S. Gypsum Co. Product of B.T. INCORPORATED

7-1-01 AR
7-1-99 RM
3-5-92 LS
10-12-96 RM

5.0-276

Bk 33 Pg 23

Bk 51 Pg 26

Bk 51 Pg 01

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R 259 E

R 260 E

EXHIBIT D

LAFCO APPLICATION

Imperial County Local Agency Formation Commission
 509 South 8th Street, El Centro, CA 92243
 (760) 353-4115 Phone (760) 353-4115 Fax

The undersigned hereby petition(s) the Local Agency Formation Commission of Imperial County for approval of a proposed change of organization or reorganization, and stipulate(s) as follows:

Applicant's Name United States Gypsum Company	
Site Address Hwy 80 and U.S. Gypsum Co. Rd	Telephone Number 760-358-3200
City Plaster City	State California
Zip Code	
Name of proposal IID Inclusion of United States Gypsum into Imperial Unit	
1	This proposal is made pursuant to California Government Code (commencing with Section 56000, Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000).
2	The specific change(s) of organization proposed is/are: <input type="checkbox"/> Annexation <input type="checkbox"/> Sphere of Influence <input type="checkbox"/> Other <input type="checkbox"/> Detachment <input type="checkbox"/> Consolidation <input checked="" type="checkbox"/> Incorporation <input type="checkbox"/> Formation of _____
3	The boundaries of the territory(ies) included in the proposal are as described in Exhibit(s) attached hereto and by this reference incorporated herein, _____.
4	The territory(ies) included in the proposal is/are: <input type="checkbox"/> inhabited (12 or more registered voters reside) <input checked="" type="checkbox"/> uninhabited.
5	Is this proposal consistent with the sphere of influence of the affected city and/or district(s). <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

LOCAL AGENCY FORMATION COMMISSION (IMPERIAL COUNTY) (LAFCO)
 509 SOUTH 8TH STREET EL CENTRO CA 92243 (760) 353-4115 Phone (760) 353-4115 Fax
 EXECUTIVE OFFICER - JURG HEUBERGER

6	<p>The reason(s) for the proposed <u>inclusion</u> (annexation, detachment, reorganization, etc.) is/are: (Describe in detail - use attached sheet if necessary.)</p> <p><u>To obtain canal water for plant operations.</u></p>
7	<p>The proposed <u>inclusion</u> is requested to be made subject to the following terms and conditions:</p> <p><u>1. Need 1,000 AF/yr</u></p>
8	<p>The person(s) signing this petition have signed as <input type="checkbox"/> registered voters or <input checked="" type="checkbox"/> owners of land (check only one).</p>
9	<p>Would this proposal create an island of unincorporated territory?</p> <p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>If YES, please explain.</p>
10	<p>If the formation of a new district(s) is included in the proposal: <u>Not applicable</u></p> <p>(a) The principal act(s) under which said district(s) is/are proposed to be formed is/are:</p> <p>(b) The proposed name(s) of the new district(s) is/are:</p> <p>(c) The boundaries of the proposed new district(s) are as described in Exhibits _____, _____, heretofore incorporated herein.</p>

LOCAL AGENCY FORMATION COMMISSION IMPERIAL COUNTY (LAFCO)
 609 SOUTH 5TH STREET EL CENTRO-CA 92243 (760) 363-4115 Phone (760) 363-4132 Fax
 EXECUTIVE OFFICER URG HEUBERGER

11	<p>Is there a good likelihood of a significant increase in population in the subject area within the next ten years?</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO In unincorporated areas? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO In incorporated areas?</p>
12	<p>How many parcels are included in the proposal? <u>Two</u> List all Assessors' Parcel Numbers in subject territory. <u>Parcel number 034-360-6901 and</u> <u>Parcel number 034-360-9101</u></p>
13	<p>Does the application contain 100% written consent of each property owner in the subject territory? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p>
14	<p>Total land area: (Acres) [Net] <u>315.22</u> [Gross] <u>315.22</u></p>
15	<p>What is the planned General Plan designation of the area by the affected city? <u>A2, A2R, GS, A3, and M3</u></p>
16	<p>Describe any special land use concerns expressed in the above plans. <u>None</u></p>
17	<p>Specify any and all existing land use(s). <u>Gypsum Manufacturing Facility</u></p> <p>What is the proposed land use(s)? <u>No change</u></p> <p>(Describe your project in detail) <u>Include United States Gypsum Company in the IID Imperial Unit to receive canal water. A pumping station and waterline would be installed from the west side canal to the United States Gypsum Company Plaster City Plant to deliver water.</u></p>

LOCAL AGENCY FORMATION COMMISSION (IMPERIAL COUNTY) (LAFCO)
509 SOUTH 8TH STREET EL CENTRO, CA. 92243 (760) 353-4115 Phone (760) 353-4132 Fax
EXECUTIVE OFFICER JURG HEUBERGER

18	<p>What is the existing County zoning? <u>A2 (Agricultural)</u></p> <p>What is the proposed County zoning? <u>No change</u></p>
19	<p>Has or is the area been/being pre-zoned? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>What is the pre-zoning classification? _____</p> <p>What date was this pre-zoned? _____</p>
20	<p>Will the annexed territory be liable for its share of existing bonded indebtedness?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p>
21	<p>Will the annexed territory be included within any particular Tax Division or Zone of the annexing territory? Please specify.</p> <p><u>No.</u></p> <p>_____</p> <p>_____</p>
22	<p>If an incorporation is included in the proposal: <u>Not applicable</u></p> <p>(a) The name proposed for the new city is:</p> <p>_____</p> <p>(b) Provisions are requested for appointment of:</p> <p>(i) city manager <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>(ii) the city clerk and city treasurer <input type="checkbox"/> YES <input type="checkbox"/> NO</p>
23	<p>If the proposal includes the consolidation of special districts, the proposed name of the consolidated district is <u>Not applicable</u></p> <p>_____</p> <p>_____</p>

NOTICE:

Prior to the effective date of any jurisdictional change (i.e. annexation, detachment, etc.) the governing bodies of all agencies whose service areas or service responsibilities would be altered by such change shall meet to determine the amount of property tax revenues to be exchanged between and among such affected agencies. Notwithstanding any other provisions of law, no such jurisdictional change shall become effective until each county and city included in such negotiation agrees, **BY RESOLUTION**, to accept the negotiated exchange of property tax revenues.

LOCAL AGENCY FORMATION COMMISSION (IMPERIAL COUNTY) (LAFCO)
 509 SOUTH 8TH STREET EL CENTRO-CA.-92243 (760) 353-4115 Phone (760) 353-4132 Fax
 EXECUTIVE OFFICER - JURG HEUBERGER

NOTE: The resolutions referred to above shall be attached to this application prior to filing with the Local Agency Formation Commission. The Executive Officer of the Local Agency Formation Commission shall not issue a Certificate of Completion of Filing (COF) until such resolution is filed with LAFCO.

Please complete the names and addresses of persons who are furnished copies of the Agenda and Executive Officer's Report and who are to be given mailed notices of the hearing of this proposal.

<u>NAME</u>	<u>ADDRESS</u>	<u>TELEPHONE</u>
Gabe Johnson	3810 W Evan Hughes Hwy, El Centro	760-358-3200
Gary D. Weatherford	255 California Street, 10th Floor San Francisco, CA 94111	
Chris McElroy	125 South Franklin Street, Chicago, IL	60606
David Wonnell	125 South Franklin Street, Chicago, IL	60606
Matt Huss	United States Gypsum Company, Plaster City, CA	92243

Wherefore, petitioner(s) request(s) that proceedings be taken in accordance with the provisions of Section 56000, et seq. of the Government Code and herewith affix signature(s) as follows:

Chief Petitioners (not to exceed three):

<u>DATE</u>	<u>PRINTED NAME</u>	<u>SIGNATURE</u>	<u>RESIDENCE ADDRESS</u>

JH/s/GJ/LAFCO/LAFCO PETITION AND FORMS/LAFCO APPLICATION

LOCAL AGENCY FORMATION COMMISSION (IMPERIAL COUNTY) (LAFCO)
 909 SOUTH 2ND STREET EL CENTRO-CA 92243 (760) 353-4115 Phone (760) 353-4122 Fax
 EXECUTIVE OFFICER: JURS HEUBERGER

LAFCO INDEMNIFICATION AGREEMENT

As part of this application, applicant and real party in interest, if different, agree to defend, indemnify, hold harmless, and release the Imperial County Local Agency Formation Commission, its agents, officers, attorneys, and employees (including consultants) from any claim, action, or proceeding brought against any of them, the purpose of which is to attack, set aside, void, or annul the approval of this application or adoption of the environmental document which accompanies it. This indemnification obligation shall include, but not be limited to, damages, costs, expenses, attorney fees, or expert witness fees that may be asserted by any person or entity, including the applicant, arising out of or in connection with the approval of this application, whether or not there is concurrent negligence on the part of the Imperial County Local Agency Formation Commission, its agents, officers, attorneys, or employees (including consultants).

If any claim, action, or proceeding is brought against Imperial County Local Agency Formation Commission, its agents, officers, attorneys, or employees, to attack, set aside, void, or annul the approval of the application or adoption of the environmental document which accompanies it, then the following procedures shall apply:

1. The Executive Officer shall promptly notify the Commission of any claim, action or proceeding brought by an applicant challenging the Commission's action. The Commission, its agents, attorneys and employees (including consultants) shall fully cooperate in the defense of that action.
2. The Commission shall have final determination on how to best defend the case and may defend it with in-house counsel, or by retaining outside counsel. In either case applicant shall be fully responsible for all costs incurred. Applicant may request to provide his or her own counsel to defend the case, however prior written approval of the Commission shall be obtained. Said independent counsel shall work with LAFCO counsel to provide a joint defense and shall include a complete defense of LAFCO to the satisfaction of the Commission.

Executed at _____ California on _____, 200_____

APPLICANT

Name: _____

By: _____

Title: _____

Mailing Address: _____

REAL PARTY IN INTEREST

(If different from Applicant)

Name: _____

By: _____

Title: _____

Mailing Address: _____

ACCEPTED/RECEIVED BY _____ DATE: _____

PROJECT ID NO. _____ APN _____

LAFCO (Local Agency Formation Commission) 509 S 8th Street, El Centro, Ca. 92243 760-353-4115
G:\LAFCO\LAFCO General Indemnification 9 11 2003

EXHIBIT #2
(1 PAGE)**donnatisdale**

From: "Rosa Soto" <rosasoto@co.imperial.ca.us>
To: "donnatisdale" <donnatisdale@hughes.net>
Cc: "Carina Alcantar" <carinaalcantar@imperialcounty.net>
Sent: Thursday, July 06, 2006 1:54 PM
Subject: RE: US Gypsum's LAFCO app

I still don't have a date scheduled for this annexation. Please check back on September.

thank you

Rosa Soto, Office Supervisor
 Planning & Dev Servs Dept
 801 Main Street
 El Centro, CA 92243
 (760) 482-4236 extension 4237
 (760) 353-8338 fax
rosasoto@imperialcounty.net

From: donnatisdale [mailto:donnatisdale@hughes.net]
Sent: Thursday, July 06, 2006 10:34 AM
To: Rosa Soto
Subject: Fw: US Gypsum's LAFCO app

Ms. Soto,

I am doing a follow-up on the status of the LAFCO hearing on the "IID inclusion of United States Gypsum into Imperial Unit".

It has been a month since I sent my last request for inclusion on the notification list (see below), with no response, to date. Please advise me of the status of this item.

Thank you,

Donna Tisdale

----- Original Message -----

From: donnatisdale
To: rosasoto@imperialcounty.net
Sent: Wednesday, June 07, 2006 12:02 PM
Subject: US Gypsum's LAFCO app

Ms. Soto,

Thank you for responding to my request for information so promptly.

Please add my name to the notification list for the upcoming LAFCO hearing on the application for "IID inclusion of United States Gypsum into Imperial Unit". It is my understanding that the hearing date has not been set.

Thank you.

Donna Tisdale
 619-766-4170 ph
 619-766-4922 fax
donnatisdale@hughes.net
 P.O. Box 1275
 Boulevard, CA 91905



Upgrade Your Email - Click here!

Imperial Irrigation District
Imperial, California

WATER RATES

SCHEDULE NO. 1

General Agricultural

Applicable to:

Service where water is taken from the canals of the District for general irrigation use by lands or properties located within the Imperial Unit of the District.

Water Rate

For all water delivered
Schedule (a), (b) and (c)

\$17.00 per acre-foot

Stock Water

The minimum charge for delivery of
"stock water run" shall be equal to
one-half the above charge Schedule
No. 1 (a) above only

\$8.50 per day

Board Action – March 15, 2005

Date Effective – April 1, 2005

Imperial Irrigation District
Imperial, California

WATER RATES

SCHEDULE NO. 7

General Industrial Service

Applicable to water service to all industrial users who divert water from the District's canal system within the Imperial Unit.

Exception: Where there is a signed contract between water user and IID Board of Directors.

Water Rate

For all water delivered

Five times Schedule No. 1

Annual Minimum Charge

Annual minimum charge shall be 5 times above rate

Drainage Limits

The limit on drainage is set at 5 percent of the total volume of water received within a billing period and the maximum allowable flow rate shall be 10 percent of the maximum flow rate of the water received but shall not exceed 672 gallons per minute (1.5 cfs).

Assessment for Excess Drainage

An assessment of three (3) times the General Industrial Service rate will be charged for excess water discharged into the District drain.

Board Action - June 7, 2000

Date Effective - July 1, 2000



Linda S. Adams
Secretary for
Environmental Protection

California Regional Water Quality Control Board
Colorado River Basin Region

73-720 Fred Waring Drive, Suite 100, Palm Desert, California 92260
(760) 346-7491 • Fax (760) 341-6820
<http://www.waterboards.ca.gov/coloradoriver>

EXHIBIT #4
(3 PAGES)



Arnold Schwarzenegger
Governor

MEMORANDUM

TO: Ms. Donna Tisdale
P.O. Box 1275
Boulevard, CA 91905

FROM: Jose L. Angel, P.E.
Assistant Executive Officer

DATE: July 14, 2006

SUBJECT: UNITED STATES GYPSUM COMPANY EXPANSION/MODERNIZATION
PROJECT (EIR/EIS SCH NO. 2001121133)

Dear Ms. Tisdale,

Thank you for contacting us to share your concerns about the above-mentioned project. The United States Gypsum Company (USGC) is proposing to expand quarrying operations and upgrade plant capacity/operations at its Plaster City Quarry and its Plaster City gypsum processing plant, respectively. The quarry and ore crushing facilities are about 26 miles north of the Plaster City plant. The plant is about 6 miles northeasterly of Ocotillo Wells, in Imperial County. Current plant operations rely on groundwater from the Ocotillo-Coyote Wells Groundwater Basin, which is in the Imperial Hydrologic Unit. You are concerned with the short- and long-term impacts that the proposed project could have on groundwater quality and quantity. We share your concerns and feel the proposed EIS/EIR is deficient in the area of mitigation of water quality impacts. The water quality impacts are mainly triggered by the proposed increase in pumping of groundwater to support the plant's operations.

28-40

Division 7 of the California Water Code (a.k.a. Porter-Cologne Water Quality Control Act) designates the State Water Resources Control Board (State Board) and this Regional Water Quality Control Board (Regional Board) as the principal state agencies with primary responsibility for coordination and control of water quality for the Colorado River Basin Region (California Water Code § 13001). The Regional Board adopted the Water Quality Control Plan for the Colorado River Basin (Basin Plan) pursuant to provisions of the California Water Code (CWC§ 13240 et seq.). The Basin Plan is codified in Title 23 of the California Code of Regulations (CCR), and it establishes beneficial uses for waters in the region and water quality objectives (WQOs) to protect the uses.

28-41

California Environmental Protection Agency

Residents in the area and/or within the influence of the proposed project rely on groundwater for their domestic needs. Indeed, the beneficial uses of groundwater in the Ocotillo-Coyote Wells Groundwater Basin are Municipal Supply and Industrial Supply (Basin Plan, p. 2-18). A key WQO for protection of the Municipal Supply use is the Maximum Contaminant Limits (MCLs) for Total Dissolved Solids specified by 22 CCR Sec. 64435 et seq. (Basin Plan, p. 3-9). USGC's proposed increased pumping of its wells has not just significant potential to degrade the quality of the subject aquifer due to the lateral migration of groundwater with higher Total Dissolved Solid (TDS) into groundwater with lower TDS—an issue explicitly acknowledged in the draft EIR/EIS (see Table S-1, p. S-12)—but it also has significant potential to cause violation of the TDS MCLs for groundwater. The project proponent proposes to mitigate this impact, in part, by providing an alternative or replacement water supply to affected residents (e.g., bottled water or hook up to an existing municipal District). It seems to us that EIR/EIS fails to recognize that the proposed mitigation would also result in additional impacts on public services (i.e., impacts on the municipal District to increase supply capacity and/or develop additional water to service the affected residents). This is a reasonably foreseeable impact that needs to be evaluated pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines (CEQA 20165; 14 CCR 15060 et seq.). Moreover, the proposed mitigation (i.e., monitoring and providing an alternate water supply) does not reduce the overall impact to a level of non-significance because a significant portion of a groundwater basin would be adversely impacted for current and future generations.

28-41
Con't.

The EIR/EIS discusses several alternatives that could prevent (or mitigate to a non-significant level) the TDS impacts, including (1) partly or fully relying on Colorado River water from the Imperial Irrigation District (IID) for the proposed expansion; and (2) drilling new production groundwater wells in the area of the plant, and treating the extracted water from the new wells via reverse osmosis (RO). We were not able to discern in the draft EIR/EIS whether using IID supplied water (partly or fully for the expansion) has been rejected by the CEQA lead agency. We believe this alternative is viable and would prevent and/or mitigate the above-mentioned impacts. In fact, on April 4, 2006, the IID Board of Directors approved IID Resolution No. 8-2006, which petitions the Imperial County—who acts as the Local Agency Formation Commission for Imperial County—to allow the IID to incorporate the USGC property within the IID area of service so that the IID can provide up to 1000 acre-feet/year of Colorado River water for the above-mentioned plant operations. We support and applaud the IID action. Considering the foregoing, and for CEQA purposes, we believe the CEQA Lead Agency (i.e., Imperial County) and the project proponent must pursue this option as a viable alternative under CEQA and do the necessary CEQA analyses, rather than stating in the EIR/EIS that it is “unknown” whether an agreement can be secured because of current litigation surrounding the Quantification Settlement Agreement and

28-42

the water transfer between the IID and the San Diego County Water Authority. Based on the IID Resolution, an agreement can and should be pursued. Similarly, Alternative 2, above, should be evaluated in more detail because it would also prevent the above-mentioned significant water quality impacts. The draft EIR/EIS instead states that this alternative was considered but rejected based on economic, environmental, and technological factors. A comparison of the key and specific economic, environmental, and technological factors associated with this alternative against those of the draft EIR/EIS preferred alternative (and the IID water alternative) would be useful in this regard to strike a balance between the stated benefits of the project (e.g., creation of 85 new jobs for the area, increased tax revenue for the County, etc.) and the damage to groundwater resources. Although there would be an economic impact associated with this alternative, we do not feel that treating the water via RO (or additional chemicals to make it potable) and building ponds to contain the wastes resulting from water treatment (e.g., RO wastes) would have a significant impact on groundwater quality, provided the ponds and discharge to the ponds comply with waste discharge requirements from this Regional Board.

28-42
Con't.

We acknowledge the Regional Board's limitation to control groundwater extraction/pumping (i.e., lack of jurisdiction over water rights issues). Nevertheless, we feel obligated to weigh in the subject matter because the projected impact is on waters of the State, and the project as proposed practically could eliminate the Municipal Supply beneficial use of an aquifer. The impact may be economically irreversible, is in direct conflict with the Basin Plan, and short-changes water quality. Consequently, it is our intention to recommend the Regional Board use any and all of its available powers to protect the area's groundwater resources for current and future generations.

28-43

By copy of this memorandum we are sharing our concerns with the CEQA and NEPA lead agencies. If you have any questions regarding this matter, please call Ms. Joan Stormo or me at (760) 776-8932. Thank you.

cc: Jurg Heuberger, Imperial County Planning Department, El Centro
Greg Thomsen, United States Bureau of Land Management SBL, El Centro
Nancy Wright, Chairwoman, Regional Board
Michael King, IID, Imperial

Letter 28
Donna Tisdale, July 16, 2006

Comment 28-1:

Response: Comment noted. The IID Board adopted Resolution No. 8-2006 in April at about the same time the Draft EIR/EIS was published. Also see General Response 4.3.4. No farm will be fallowed for the USG Project.

Comment 28-2:

Response: Comment noted. See General Response 4.3.4.

Comment 28-3:

Response: Comment noted.

Comment 28-4:

Response: The Regional Water Quality Control Board was provided a Notice of Preparation and the State Clearinghouse is on the County's distribution list for the Draft EIR/EIS.

Comment 28-5:

Response: The amount of information in the Draft EIR/EIS is adequate to estimate the effect of an increase in pumping by the Proposed Action. The information is also adequate enough to develop the Monitoring and Mitigation Measures proposed in the Draft EIR/EIS. See General Response 4.3.4.

Comment 28-6:

Response: Potential impacts on neighboring residential and other wells are addressed in Section 3.3.3 of the Draft EIR/EIS. Water levels in the Basin are expected to decline by up to 10 feet under baseline conditions (i.e., without the project) over the next 80 years, and if USG were to increase pumping to 767 acre-feet per year, then the decline is expected to increase by an additional 20 to 23 feet. The numerical groundwater model generated a calculated total decline of about 30 feet over an 80 year period. These impacts are deemed significant prior to mitigation. Mitigation measures (e.g., deepening wells) are listed; implementation of these measures would reduce the impact to less than significant. See General Response 4.3.6 for discussion of hydrogeology and groundwater conditions, 4.3.7 for discussion of the water balance, and 4.3.8 for application of the numerical model to impacts on groundwater levels.

Comment 28-7:

Response: Recharge and pumping are discussed in Draft EIR/EIS subsection Hydrology in Section 3.3 Hydrology and Water Quality. See General Response 4.3.7 for additional discussion of recharge (inflow) relative to outflow.

Comment 28-8:

Response: See Response to Comment 30-71. The reader should also refer to Section 4.3.12 Climate Change.

Comment 28-9:

Response: Comment noted. As noted in the Draft EIR/EIS, two alternatives utilizing IID water were studied for this Draft EIR/EIS. See General Response 4.3.4. Several assertions in the comment are inaccurate.

Comment 28-10:

Response: See General Responses 4.3.6 and 4.3.7 for discussion of historical and existing conditions and potential impacts on groundwater level and quality.

Comment 28-11:

Response: Comment noted. Potential impacts of groundwater decline or water quality decline resulting from the Proposed Action are addressed through Mitigation Measures 3.3-1 (pages 3.3-71 through 3.3-72) and 3.3-2 (pages 3.3-78 through 3.3-79), as modified.

Comment 28-12:

Response: Comment noted. Mitigation Measures 3.3-1 (pages 3.3-71 through 3.3-72) and 3.3-2 (pages 3.3-78 through 3.3-79) specify that water will be provided at no cost to the affected party or parties, if any. Thus, for all practical purposes, a large number of possible sources exist, such as bottled, treated or other well water.

Comment 28-13:

Response: Approval of this Draft EIR/EIS would be contingent on USG agreeing to abide to restrictions and requirements specified by the Lead Agency, in this case, the County. Further, part of the project calls for greater assessment and evaluation of the Basin through additional monitoring.

Comment 28-14:

Response: The baseline standards for water quality will be determined after analysis of samples as outlined in the Groundwater Monitoring Program on page 3.3-86 of the Draft EIR/EIS. Water quality monitoring triggers are discussed starting on the bottom of page 3.3-86 and at the top of page 3.3-87. Triggers for mitigation measures due to groundwater quantity and quality changes are presented in sections Mitigation Measures 3.3-1 (pages 3.3-71 through 3.3-72) and 3.3-2 (pages 3.3-78 through 3.3-79). See also General Response 4.3.5.

Comment 28-15:

Response: See Response to Comment 28-6.

Comment 28-16:

Response: See Responses to Comments 28-13 and 28-14. Also see General Responses 4.3.4 and 4.3.5.

Comment 28-17:

Response: Over the years USG has installed conservation measures to reduce the use of water. See Response to Comment 25-8.

Comment 28-18:

Response: No seeps or springs have been documented in the immediate vicinity of proposed Quarry Well No. 3. The effect on major down-gradient springs of increased pumping at the Quarry was addressed in the Draft EIR/EIS in detail. As stated, the increased pumping at the Quarry would represent a minuscule portion of the total pumping upstream of San Felipe Creek Spring and Fish Creek Spring. Discharges at these springs have increased and become perennial due to increased local irrigation. The increase of Quarry pumping would have an effect that is less than significant. (Page 3.3-103).

Comment 28-19:

Response: See General Response 4.3.2 and Response to Comment 28-18.

Comment 28-20:

Response: The Plant and Quarry are both regulated by multiple agencies. The only water discharge at the Plant is sanitary waste. All other solid waste is managed as required by law. Additionally the Plant area is subject to Regional Water Quality Control Board Order 96-001.

Comment 28-21:

Response: The material being mined is not part of the aquifer system. The material is above any water table and is not aquifer material. The mining operations of USG will not reduce the aquifer storage capacity.

Comment 28-22:

Response: The proposed Project impacts to land use and planning issues are addressed in Volume I, Section 3.9, Land Use of the Draft EIR/EIS, Water Resources are addressed in Volume I, Section 3.3, Hydrology and Water Quality of the Draft EIR/EIS. The Ocotillo/Nomirage Community Area Plan (ONCAP), is an area plan supplement to the Imperial County General Plan. It was adopted in April, 1994, superseding and replacing the “current land use plan for the Yuha Desert Planning Unit” adopted in 1973. The goals and objectives of the plan include:

Goal 4: Limit the expansion of industrial development within the Ocotillo/Nomirage Community Area.

Objective 4.3: Monitor existing industrial land uses to ensure land uses do not pose an environmental threat and/or cause a contamination of groundwater.

Objective 5.3: Protect the groundwater in the Ocotillo/Nomirage Community Area from overdraft and saline conditions.

Objective 5.4: Ensure that new development proposals do not contribute to overdraft or increase salinity of groundwater.

Objective 5.8: Work with U.S. Gypsum and the Imperial Irrigation District to examine other water sources that can be used at the U.S. Gypsum manufacturing plant and reduce their dependence on groundwater.

Goal 6: Identify and protect areas of regionally significant mineral resources which are in areas suitable for surface mining activities.

Objective 6.1: Provide adequate space and land use classifications to meet current and projected economic needs for extractive activities.

Objective 6.2: Ensure that surface mining operations are operated to avoid air and water quality degradation including groundwater, soil erosion, wildlife habitat destruction, and other adverse environmental impacts, and that all surface mining operations comply with the State Surface Mining and Reclamation Act (SMARA) and County Surface Mining Ordinance.

Objective 8.3: Regulate development adjacent to or near all mineral deposits.

Objective 8.5: Require reclamation of lands where mining, irrigation, landfills, solid waste, hazardous materials (waste storage or disposal and natural erosion has occurred, so as to pose no danger to public health and safety.

ONCAP does not stipulate the preparation of a water study for proposed project but under Section D. Water/Sewer, page 8, it does state “water use, quality, quantity and protection are key issues in planning for the area. All land use proposals shall be reviewed to determine their impacts on groundwater quantity and quality”.

The Draft EIR/EIS provides that analysis, subject to review and revision, in compliance with the intent of the plan and CEQA. See General Response 4.3.11.

Comment 28-23:

Response: The ONCAP was prepared in April 1994 as a portion of the Imperial County General Plan of 1993. The General Plan Land Use Element has been revised most recently in December 2003. State law requires that the housing element be revised “not less often than at five-year intervals following the fourth revision” (California Government Code Section 65588(7)).

Comment 28-24:

Response: The ONCAP states under II, Existing Conditions, C. Population, Page 7; “Due to water constraints, it is not anticipated the Ocotillo/Nomirage Community Area will experience a significant amount of population growth”. H. Housing, page 9; “... it is not expected that large residential subdivisions or multiple-family housing units will be developed within the planning area.

Comment 28-25:

Response: Impacts to the Peninsular bighorn sheep are addressed in Volume I, Section 3.5, Wildlife of the Draft EIR/EIS. Background reports in support of the analysis appear in Volume II, Appendices, Appendix C. Impacts of the proposed Project on Peninsular bighorn sheep are subject to a Section 7 consultation currently in process between the BLM and U.S. Fish and Wildlife Service. The critical habitat boundary for Peninsular bighorn sheep has also been modified to exclude the Quarry area. See General Response 4.3.1.

Comment 28-26:

Response: San Felipe Creek is addressed in Volume I, Section 3.5, Wildlife and Volume II Appendix C-4 and C-5. Quarry expansion would have an insignificant

impact on surface water as shown in Table 3.5-2, page 3.5-33 and Figure 3.5-4, page 3.5-35. See also General Response 4.3.2 (desert pupfish).

Comment 28-27:

Response: Comment noted. Section 3.6 in the Draft EIR/EIS determined that the proposed Project would not significantly impact air quality with implementation of Project design features conditioned in USG's air quality permits and mitigation measures, compliance with existing ICAPCD rules and regulations, and the purchase of offsets for Nitrogen Oxide (NO_x). Also see General Response 4.3.10.

Comment 28-28:

Response: The Plaster City facility is located in a severe PM₁₀ non-attainment area. Efforts are continually being made to reduce air emissions with the installation of equipment such as low NO_x burners, dust collectors, and dust suppression systems. The proposed Plant also lead to the use of enclosed storage areas. The facility tests emission consistent with the State and Federal Agencies. In addition, ongoing noncompliance issues will be reduced with the future capping of the IMSA. See also General Response 4.3.10.

Comment 28-29:

Response: Comment noted. USG is required to comply with air quality permit conditions at the Plant and Rule 801, which require visible dust emissions (VDE) at conveyors, transfer points, and emission control units (dust collectors) to not exceed 7 percent opacity, at the integrated milling calcining unit to not exceed 10 percent, at the enclosed gypsum rock storage building to not exceed 15 percent, and any fugitive dust sources to not exceed 20 percent opacity as measured per methods described in ICAPCD Rule 800, Appendix A. Also see General Response 4.3.10.

Comment 28-30:

Response: Comment noted. We are not aware of any chalk covered employees at the site. See also General Response 4.3.10.

Comment 28-31:

Response: The Plaster City Plant has an industrial hygiene program in place. Employees use personnel health monitors that collect air samples. Deficiencies if any are corrected promptly. The samples are then analyzed and the findings are reported to the Plant and any necessary corrective action is promptly completed.

Comment 28-32:

Response: As discussed in Section 3.11.3.2 of the Draft EIR/EIS, future traffic conditions with the Project were analyzed through the year 2025. In order to estimate future traffic volumes in the year 2025, the 2002 traffic counts, (which include Project traffic), were increased at a rate of 2 percent per year for 23 years. All study intersections and roadway segments will continue to operate at a level of service of A or B for this "future plus Project" condition. See Draft EIR/EIS, p. 3.11-15.

The Draft EIR/EIS notes, on page 3.11-16, that no new projects or other activities had been proposed within the areas affected by the Project that could result in a significant cumulative traffic effect. Nonetheless, by assuming a 2 percent annual increase in traffic volumes over a 23-year period, the Draft EIR/EIS has addressed the potential cumulative traffic effects of the Project and other possible projects in the area for the foreseeable future.

Comment 28-33:

Response: Comment noted, with disagreement.

Comment 28-34:

Response: See General Response 4.3.13.

Comment 28-35:

Response: Comment noted, with disagreement.

Comment 28-36:

Response: Mitigation measures are presented in each of the Resource Analysis sections. A summary of potential impacts and mitigation measures appears on Table S-1 beginning on page S-9, Volume I of the Draft EIR/EIS.

Comment 28-37:

Response: Comment noted with disagreement.

Comment 28-38:

Response: See General Responses 4.3.4 and 4.3.5. Also see General Response 4.3.13.

Comment 28-39:

Response: Comment noted with disagreement; potential impacts on groundwater Basin supply (Impact 3.3-2) and groundwater quality (3.3-4) are evaluated in Section 3.3 of the Draft EIR/EIS and are deemed significant. See General Responses 4.3.6 and 4.3.7.

Attachment to 28 – RWQCB Memorandum

Comment 28-40:

Response: Comment noted. The potential water quality impacts on individual well owners (Impact 3.3-3) have been evaluated and are not significant with mitigation. However, the Draft EIR/EIS concluded that potential quality impacts on the groundwater Basin (Impact 3.3-4) are significant and are not reduced to less than significant with the mitigation measures.

Comment 28-41:

Response: Comment noted. For impacts on individual wells, Impact 3.3-3, the mitigation measures, if required, would deliver water with a TDS of less than 500 mg/L. With regard to Impacts 3.3-2 and 3.3-4, the Draft EIR/EIS concluded that potential impacts on the groundwater Basin are significant and are not reduced to less than significant with the mitigation measures.

Comment 28-42:

Response: See General Comments 4.3.4 and 4.3.5. To more specifically answer the questions, the use of groundwater by the plant was studied but not considered viable as the water has a salinity of about 14,000 mg/L and would require RO with a concentrated waste stream along with the large energy requirement. In addition, aquifer parameters are tight and several wells spaced a long distance from the USG property would create additional environmental impacts. See General Response 4.3.4.

Comment 28-43:

Response: The Draft EIR/EIS concludes that potential impacts on the groundwater Basin are significant and are not reduced to less than significant with the mitigation measures. This finding acknowledges overdraft and the continuing depletion of groundwater storage. However, the Project would not eliminate the Municipal Supply beneficial use of the groundwater Basin. As described in the Draft EIR/EIS, groundwater levels in the Basin are expected to decline by up to 10 feet under baseline conditions (i.e., without the project) over the next 80 years, and if USG were to increase pumping to 767 acre-feet per year, then the decline is expected to increase by an additional 20 to 23 feet. However, it

should be noted that the thickness of the Basin in the Ocotillo area is approximately 460-500 feet and the expected additional drawdown is relatively minor.

RECEIVED

Letter 29

JUL 17 2006

July 17, 2006

IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Sierra Club, San Diego Chapter
Serving San Diego and Imperial Counties
3820 Ray Street, San Diego CA 92243
phone 619-299-1743, fax 619-299-1742

July 17, 2006

By fax

To: Jurg Heuberger, Director,
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Linda Self
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From: Edie Harmon, Imperial County Subcommittee, Sierra Club San Diego Chapter
local address: P.O. Box 444, Ocotillo, CA 92259

Re: **US Gypsum Expansion/Modernization Project Draft EIR/EIS 4/06**
SCH No. 2001121133

These comments will focus on groundwater and land use/planning issues as others have provided more detailed review of other sections of the USG Draft EIR/EIS 4/06 and Appendices. These comments incorporate by reference previous concerns and submissions dating back to 1993 that are related to the various aspects of this project, and reference the following major sources relevant to groundwater issues and planning review:

Appellate Court D0D034281 Decision 10/26/00 (Imperial County Superior Ct. No. 97911) Sierra Club v. County of Imperial, US Gypsum, Real Party in Interest

BE 96 Bookman-Edmonston (BE) 1996 Ocotillo/Coyote Wells Basin Hydrology and Groundwater Modeling Study prepared for U.S. Gypsum

BE 04 Bookman-Edmonston 2004 Ocotillo/Coyote Wells Basin Hydrology and Groundwater Modeling Study prepared for U.S. Gypsum and included as Appendix B-2 in Vol. II of the USG USG DRAFT EIR/EIS 4/06 4/06

ONCAP Ocotillo Nomirage Community Area Plan 1994, part of the Land Use Element of Imperial County General Plan.

USG USG DRAFT EIR/EIS 4/06 U.S. Gypsum Company Expansion/Modernization Project Draft EIR/EIS 4/06 SCH No. 2001121133

Groundwater Rights in California

1. An undated (1996?) paper entitled “Groundwater Rights in California” by Christie Moon Crother, Senior Water Resources Planning Analyst for the Eastern Municipal Water District, San Jacinto, CA. Prompted our review of the California Constitution and CA Water Code 106 for their relevance to the USG proposed groundwater pumping project from what all agree is a basin with declining water levels (USG USG DEIR/EIS 4/06/EIS 4/06 at 3.3-76). Similarly we were inspired to once again to review case law with respect to USG’s Proposed groundwater project. 29-1

2. “In California, water rights involve the right to use water not the right to own water. California law recognizes and protects rights to extract and use water percolating beneath the surface of the land. Any water found underground is presumed to be percolating groundwater and is not subject to state statutes. While the Water Code implies the existence of groundwater rights, their doctrinal bases and characteristics are essentially the product of the decisions of the courts. Percolating groundwater is essentially case law.” (Crother at p.1.) 29-2

3. **California Constitution Article X, Section 2, Water** states that:
 “It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use be prevented, and that the conservation of such waters is to be exercised with a view to reasonable and beneficial use thereof in the interest of the people and for the public welfare.. The right to water or to the use or flow of water ... in this State is and shall be limited to such water as shall be reasonably required for beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.” 29-3

4. Court decisions related to groundwater use have “established that groundwater may be appropriated by others and pumped and transported to land that does not overlie the aquifer, **after the needs of overlying property owners are satisfied, that is when there is a surplus.**” (Crother at p.1.) 29-4

5. **Katz v. Walkinshaw , overlying owners correlative rights and Imperial County’s legal efforts to stop export of groundwater to Mexico from the Ocotillo-Coyote Wells Groundwater Basin.**
 However, the use by overlying users has been considered as paramount in case law. Katz v. Walkinshaw (1902) 141 Cal. 116 established the concept of overlying water rights in which all property owners above a common groundwater basin or aquifer have a right to use the groundwater underlying their property and to make reasonable use of the groundwater on their land above the groundwater. The rights of overlying property owners to use the groundwater was determined to be “correlative”, or to be shared on a pro rata basis in times of shortage. The correlative rights prevent unlimited use of the groundwater by a single person or property owner. The Court found that the right to 29-5

pump groundwater for use on lands not overlying the basin are subordinate to the correlative rights of overlying users .

29-5
Con't.

6. It was this Katz v. Walkinshaw case that was repeatedly cited and relied upon in Imperial County's proceedings to shut down the export of groundwater from the Clifford-McDougal well in Ocotillo and the McDougal well in Yuha Estates, where both wells overlie the Ocotillo-Coyote Wells Basin. The Appellate Court in its D0D034281 Decision of 10/26/00 (Imperial County Superior Ct. No. 97911) Sierra Club v. County of Imperial, US Gypsum, Real Party in Interest did not forget the numerous cases before that same Appellate Court when Imperial County vigorously defended its authority to stop the export of groundwater from the basin in order to protect the uses of property owners overlying the basin and using water on the parcels overlying the basin.

29-6

7. A California Supreme Court decision determined that it was not necessary to adjudicate a groundwater basin to stop the export of groundwater. Corona Foothill Lemon Co. v. Lillibridge (1937) 8Cal 2d 522 found that the **fact that groundwater levels were dropping is sufficient to show that there is no surplus water.**

29-7

8. For US Gypsum's proposed project to increase its groundwater export for use on parcels many miles distant from the overlying parcels, the USG DEIR/EIS 4/06/EIS Vol II the Hydrology technical appendices and text, and the text, figures and tables of the USG DEIR/EIS 4/06/EIS reveal:

(a) that groundwater levels are and have been dropping (DEIR hydrology impacts discussion at 3.3-66 through 3.3-81) (thus, there is no surplus water) and

(b) that USG attempted to assert a right to 767 AF/Y of groundwater purportedly pumped when production levels did not support that figure reported by USG to USGS. (See USG DEIR/EIS 4/06 text at p. 3.3-29, Table 3.3-4 at p. 3.3-28, and Table 3.3-8 at p.3.3-70)

29-8

Both of these conclusions support the conclusion of the Appellate Court in its D0D034281 Decision of 10/26/00 (Imperial County Superior Ct. No. 97911) Sierra Club v. County of Imperial, US Gypsum, Real Party in Interest. Furthermore, such a USG inflated claim of groundwater pumpage above production requirements clearly represents an unreasonable use or unreasonable method of use of groundwater or a waste of water prohibited by the California Constitution. And which cannot be upheld as being reasonable for inclusion into any County Ordinances or planning documents.

9. The following USG DEIR/EIS 4/06 discussion of water levels in the basin, confirms the lack of "surplus" groundwater available for use on parcels other than the overlying property from which it is pumped. USG DEIR/EIS 4/06 text at 3.3-49 referencing Fig. 3.3-9 at p. 3.3-47 notes that the:

"hydrographs for all of the wells shown in Fig. 3.3-9 indicates that the static (non-pumping) water levels in the Ocotillo/Nomirage area have steadily declined over the last 30 years. The hydrographs for several of the wells, but most notably 16S/9E-36D2, indicate that the decline has been very consistent over this time period. This is somewhat surprising because the rate of rainfall in the basin from

29-9

1976 to 1993 was generally above average (see Figure 3.3-2) and the rate of water production from the basin from 1979 to 1996 decreased by almost 45 percent (see Figure 3.3-8). (USG DEIR/EIS 4/06 at 3.3-49.)

29-9
Con't.

10. Additionally, **California Water Codes at Section 106** states that “It is hereby declared to be the established policy of this State that the **use of water for domestic purposes is the highest use of water and that the next highest use is for irrigation.**” Therefore, regardless of the USG DEIR/EIS 4/06 suggestion that the industrial uses at Plaster City and the most economical source for obtaining water for industrial purposes is a need which should trump overlying domestic needs, case law and Water Code Section 106 do not support USG’s DEIR assertions.

29-10

11. **10/26/00 Appellate Court Decision D0D034281** (Imperial County Superior Ct. No. 97911) *Sierra Club v. County of Imperial* (re USG increased groundwater use without environmental review) in Sierra Club’s favor, contains extensive discussion of groundwater issues and reversed the trial court decision. In March 2001, the Trial Court then entered Judgement consistent with the Appellate Court decision and required preparation of an environmental impact report and rescinded permits based on the required environmental review for the already constructed factory at Plaster City.

29-11

12. The Imperial County General Plan Update and its associated EIR of 1993 do not disclose or discuss any potential for environmental consequences of the increase in split Mountain quarry operations or the massive increase in groundwater pumping for increased production at the wallboard factory if Colorado River water is not used. Likewise these documents and the 4/26/94 Ocotillo-Nomirage Community Area Plan (ONCAP)(a part of the General Plan’s mandatory Land Use Element) do not discuss the environmental or planning consequences of export of such a large quantity of groundwater from near the center of the existing residential communities and private land available for development on these communities and/or the consequences of such exportation from the groundwater basin on the potential for future growth on private lands within the area of the ONCAP. Rather, the Goals and Objectives of the ONCAP are very specific with respect to groundwater use at the US Gypsum factory, when it states:

29-12

Objective 5.8 The County will work with U.S. Gypsum and the Imperial Irrigation District to examine other water sources that can be used at the USG manufacturing plant and reduce their dependence on groundwater.
(Emphasis added.) (ONCAP pg. 10.)

13. It is our understanding that there never were any serious discussions on this subject and that the County Planning Department and Environmental Evaluation Committee simply chose to ignore this provision of the adopted ONCAP when considering US Gypsum’s 1993 and 1998 proposals to increase factory output based on increased reliance on exported groundwater from the Ocotillo-Coyote Wells basin. (See the following Exhibits included in our USG Scoping comments to County of Imperial and listed in the contents for County requested documents. See USG DEIR/EIS 4/06 Appendix A.

29-13

Sierra Club letters re 1998-1999 USG factory expansion dated: 11/23/98 (Exhibit 55); 12/4/98 (Exhibit 56); 12/7/98 (Exhibit HH); 12/9/98 (Exhibit II)
 Sierra Club letters requesting reconsideration of Neg Dec re USG expansion dated: 1/13/99 (Exhibit 54);
 Sierra Club letters re 1999 USG quarry expansion dated: 1/2/99 (exhibit JJ); 1/22/99 (exhibit D); 1/23/99 (exhibit LL); 2/11/99 (exhibit G); 1/14/99 (exhibit F)
 Sierra Club letters re 1999 USG lot merge 1/27/99 (exhibits FF and GG)
 Sierra Club letters re 1999 USG APCD permits 4/11/99 (exhibit U); 4/24/99 (exhibit MM); 9/4/00 (exhibit NN) Exhibits 55)

**29-13
 Con't.**

14. Based on the text of the ONCAP included elsewhere in the body of these comments, the DEIR's failure to discuss issues of build-out on lands within the basin subject of ONCAP, the DEIR Land Use discussion at 3.9-8 related to consistency of the Proposed Project and its groundwater use is not only woefully inadequate, but just plain incorrect.

29-14

15. Because the 4/06 USG DEIR/EIS 4/06/EIS is still woefully inadequate and misleading in terms of water use, the concerned public still has unanswered questions about future environmental impacts and the possible depletion of groundwater resources and the impact this depletion may have on groundwater quality and biological resources, particularly at sites down-gradient from the pumping center. Both the General Plan and the ONCAP, together with continuing on-going U.S. Geological Survey Water Resources monitoring of groundwater levels, groundwater quality and recharge potential, have alerted the public that there are serious issues related to large scale groundwater pumping concentrated at the US Gypsum export facilities. There has been no formal environmental review until the 4/06 USG DEIR/EIS 4/06/EIS. We still believe the BE 96 study (incorporated by reference in the USG DEIR/EIS 4/06 Technical Appendix B-2 as part of BE 04) has significant flaws as described in our 7/27/99 6 page summary and 31 page letter to the Planning Commission on the occasion of their review for the Minor Subdivision for the USG wallboard factory at Plaster City.

29-15

16. As noted in the above listed numerous Sierra Club submissions to the County, the old US Gypsum commissioned groundwater study (BE 96) was deeply flawed and could not be considered as a substitute for an EIR for the USG expansion project as indicated by the 2000 Appellate Court decision. Indeed, it was not an EIR. As Judge Judith McConnell wrote in her August 31, 2000 Statement of Decision in Case No. 676630 (Save Our forests and Ranchlands v. County of San Diego), "an environmental review deferred is an environmental review denied." She found that the decision-makers (San Diego County Board of Supervisors) had been deprived of the information it needed about potential environmental impacts, including possible contamination and depletion of groundwater resources, when it approved a General Plan Amendment amending the General Plan's Land Use Element. Judge McConnell noted that:

29-16

"Drafting an EIR or preparing a negative declaration necessarily involves some

degree of forecasting. **While foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.**” (Emphasis added.) Guidelines, Cal. Code of Regs., Tit. 14, Sec. 15144.

26-16
Con't.

Where, as here, important, detailed and relevant information is missing, it precludes informed decision making and a prejudicial abuse of discretion results. Kings County Farm Bureau v. City of Hanford (1990) 221 Cal. App. 3d.692. (Judge McConnell’s language in SOFAR 8/31/00 Statement of Decision at pp. 7,

8.)

17. In the case of the US Gypsum factory and quarry expansion, by failing to require any EIR and approving only a superficial negative declaration until the Court ordered environmental review, Imperial County has failed to meet even the minimum requirements for environmental disclosure contemplated by the California Legislature. Without providing detailed reasoning for its decision to not require an EIR for the USG expansion, Imperial County gave inadequate attention and weight to the language of its own adopted General Plan, Land Use Element’s ONCAP and to independent interpretation of USGS monitoring data for which was co-funded by the County. The 4/06 USG Draft EIR/EIS with its technical appendices remains woefully inadequate as an informational document under both CEQA and NEPA.. The USG DEIR/EIS 4/06 offers no explanation for the more than 5 year delay from the Court order and release of the USG USG DEIR/EIS 4/06. In our view, such a 5 year delay compounds the public’s perceived violations of CEQA and NEPA with respect to the USG expansion project..

26-17

18. The USG USG DRAFT EIR/EIS 4/06 **Appendix A-3 Scoping Materials fails to include the written Scoping comments** of Sierra Club and other environmental organizations that were timely submitted and dated 1/30/02 and 2/20/02 to County of Imperial Planning Department and 7/9/02 to BLM. Comments to both County and BLM pointed out the inadequacies of the description of the Project location.

26-18

19. The USG USG DRAFT EIR/EIS 4/06 both in written text and figures fails to remedy the Scoping letters’ noted **Project location deficiencies** in Fig. 1.0-1 Regional Location or in the discussion of the Proposed Action in Section 2. Specifically, the USG USG DRAFT EIR/EIS 4/06 in Section 2 fails to include maps or “figures” and fails to include text revealing the correct **project locations (including Assessor’s Parcel Numbers and Township, Range and Sections)** for the well sites in Ocotillo area and at the quarry, the Plaster City facility parcels and waste materials parcels, the quarry parcels and **distances from both the quarry operations and Plaster City operations** in relation to:

26-19

- * communities of Ocotillo, Seeley, El Centro, and residential development around an artificial lake west of irrigated agriculture and west of the Westside Main canal,
- * Centinela State Prison with its large “involuntary” population,
- * US EPA designated of Ocotillo-Coyote Wells Sole Source Aquifer (Elsinore Fault eastern boundary),
- * Imperial Irrigation District’s Westside Main Canal, nearest source of Colorado River water,
- * Bureau of Land Management (BLM) Fish Creek Mountains Wilderness Area and

Anza Borrego State Park (ABSP) wilderness areas surrounding and adjacent to the Fish Creek Split Mountain quarry site,
 * BLM West Mesa Area of Critical Environmental Concern (ACEC) and West Mesa FTHL Management Area,
 * BLM Yuha Desert ACEC and FTHL Management Area,
 * BLM San Sebastian Marsh/San Felipe Creek ACEC and USFWS designated critical habitat for desert pupfish,
 * US Fish & Wildlife Service designation of Critical Habitat for endangered Peninsular Bighorn Sheep,
 * U.S. Navy live bombing area Target 103 ,
 * BLM's Plaster City Open area surrounding the factory site north of old Hwy 80.

29-19
 Con't.

20. This earlier requested information should have been provided early in the USG USG DRAFT EIR/EIS 4/06 so reviewers could have all sensitive environmental resource areas and human population centers easily located in reference to each other. In Fig. 1.0-1 the tiny print on grey background makes it extremely difficult if not impossible to read the written words. However, it appears that most of the above information requested in the Scoping letters simply is missing from the USG DRAFT EIR/EIS 4/06 figures. Neither Fig. 1.0-1 nor the Figures in Section 2 contain dates. Underlying maps appear to contain outdated place names for geographic areas rather than the current special resource area designations for federal lands.

29-20

21. The USG wallboard factory is located at Plaster City, some 16.5 miles W of El Centro, 8 miles W of Seeley, about 4.5 miles WSW of Centinela State Prison, 4.5 miles W of the Imperial Irrigation District's (IID) Westside Main Canal, about 8 miles ENE of Ocotillo, and about 6 miles ENE (outside) of the eastern boundary (Elsinore Fault) of the US EPA designated Ocotillo-Coyote Wells Sole Source Aquifer in Southwestern Imperial County. The quarry is approximately 22 miles NW of the factory site. (Mileages from Automobile Club of Southern California Imperial County map and Federal Register vol.81, No.176, pp. 47752-47753, Sept. 10, 1996. See also BLM 1998 Surface Management Status Desert Access Guides for California Desert District El Centro, Salton Sea, El Cajon and Borrego Valley maps for quarry site location.)

29-21

22. Table 2.0-1 (at USG DRAFT EIR/EIS 4/06 p. 2.0-9) lists acreages of different areas at the Fish Creek Quarry, but fails to include Assessor's Parcel Numbers identification as requested. USG DRAFT EIR/EIS 4/06 at 2.0-8 does include or Township, Range and Section locations covering Table 2.0-1.

29-22

23. What has been the **annual production** of raw gypsum from the quarry and wallboard or other materials from the factory of each during each years of operation since operations began in 1921 (USG DRAFT EIR/EIS 4/06 at S-3)? Information should be presented in table format under USG DRAFT EIR/EIS 4/06 Sec. 1.2.3 discussion of the "need" for the proposed action. This information was requested in Scoping letters and is relevant to the public's understanding of purported groundwater usage in the past, especially in the past for which the 1996 BE report BE 06 reports there is no measured water usage data.

29-23

24. What is the proposed maximum output from each well, the quarry and for the factory, both daily, monthly and annually? When is this maximum output anticipated? How does this correlate to past and current production levels? **29-24**
25. Scoping comments requested the EIR/EIS to present in table format the **annual groundwater usage** at the Plaster City factory since operations began. What is the source of this data? Is it flowmeter readings? If so, when were flowmeters installed for each operational well and what is the amount of water pumped from each operational USG well annually? How does water usage correlate with factory output? If there is any discrepancy, what is the explanation? Such information was not found in the USG Draft EIR/EIS 4/06 or its accompanying appendices. **29-25**
26. What is the explanation for discrepancies between asserted water usage and production output noted by the USG Bookman-Edmonston (BE) study, DEIR Table 3.3-4 at p. 3.3-28, and the Appellate Court Decision? How much water is used for processing? The DEIR Table 3.3-4 data reported to USGS for years 1970-1975 appear inflated and to represent an unreasonable and therefore non-beneficial use of groundwater from a basin with declining water levels. **29-26**
27. USG has increased its water use from 400 AF/Y reported in the USG DEIR/EIS 4/06 and is currently pumping 550 AF/Y from the Ocotillo -Coyote Wells Basin according to representatives of USG. USG DRAFT EIR/EIS 4/06 at 2.0-17 and 2.0-32 describes a “gravity feed pipeline” from the Ocotillo area as providing “approximately 400 AF/Y” of groundwater. However, during a 5/18/06 meeting with representatives of and attorneys for USG, the Harmons and Julie Hamilton were told that USG is using 550 AF/Y now. **Why does the USG DRAFT EIR/EIS 4/06 state one figure for groundwater use as of the DEIR which was released for public review in April 2006 when USG employees and attorneys verbally state a figure more than 25% higher for 2006 usage?** Such an increase in groundwater usage appears to violate both CEQA and the intent of the Court when permits were revoked and preparation of an EIR required. The outdated information certainly points out the necessity for a revised DEIR at the very minimum. **29-27**
28. USG DRAFT EIR/EIS 4/06 at 2.0-18 and elsewhere asserts a “recorded high [water usage] of 767 acre-feet per year”. However, the **Appellate Court concluded that USG asserts a level of pumpage for which it has no data.** Having reviewed no evidence to contradict the Appellate Court’s reasoning, we, therefore, conclude that the 4/06 USG USG DRAFT EIR/EIS 4/06 assertion of a high water use is erroneous. As noted herein, there are a number of submissions by on behalf of USG, including DEIR Table 3.3-4 at p. 3.3-28 which confirm the Court’s conclusions. **29-28**
29. The USG commissioned Bookman-Edmonston (BE 96) study both in text at p. 6-2 and in Table 6-2 at p. 6-3 reveal no pumpage in excess of the highest estimated water use of **29-29**

600 AF/Y in 1975 by USG at the Plaster City operations. The USG commissioned BE 96 study noted that:

In addition, water use estimates for years 1970 through 1980 were made by U.S. Gypsum based on production records. Beginning in 1981, water use has been measured at each well. Table 6-2 presents a summary of U.S. Gypsum well production for the years 1976 through 1994. Estimates of water use provided to USGS are 70 percent greater than estimates of water use based upon production records during 1970 to 1975 (the only years where these records overlap). This difference could not be reconciled. (BE 96 at p. 6-2.)

**29-29
Con't.**

30. BE 04 updates BE 96 Table 6-2, but BE 04 omits information that is related to how accurate or reliable the data might be and fails to provide any reasoning that would contradict why the Appellate Court did not accept USG's assertion of a high level of pumpage (767 AF/Y) to which USG repeatedly references as some purported "right" which we believe would not be consistent with the language of the California Constitution Article X, Section 2.

29-30

31. The above BE 96 statement suggests that, according to BE 96 report, the highest recorded USG pumpage is more likely well below the now asserted 767 AF/Y. See also DEIR Table 3.3-4 at p. 3.3-28 for the historic USG water use at the Plaster City factory. This also raises questions about the reasons for what appears to be incorrect information provided by the USG company to USGS, the federal agency doing the groundwater study on the sole source basin from which USG was and is the largest pumper and exporter of groundwater. It should also be remembered that USG provided housing for company employees at Plaster City [population of about 65] until approximately 1987. However, it is highly unlikely that such a small population could use a quantity of groundwater so large as to account for the 70 percent discrepancy.

29-31

32. It is of interest to note that the company failed to record its water usage at that time to the appropriate State agency to establish its water usage in excess of 25 feet/year as required for users in other counties with even larger groundwater basins. Absent some verifiable data indicating that higher level of pumpage and explaining why pumpage, was so high for that year, the public has good reason to challenge the 1972 pumpage as having established any pre-existing rights and thereby justifying the elimination of a requirement for Draft EIR for the proposed increased groundwater pumpage up-gradient of the nearby residential subdivision of Nomirage.

29-32

33. Indeed, the Appellate Court decision, in text and footnotes, also recites the problems with USG's asserted levels of past pumpage for export to the Plaster City factory. In footnote 2, the Court noted that:

2 Bookman-Edmonston could not reconcile USG's water use calculated from USG's production reports with the water use USG reported to the United States Geological Survey, which showed levels 70 percent greater than production use levels. Further, USG admits "[t]he data used to determine these older water use

29-33

levels [1966-1975] have not been located.” Therefore, USG’s claimed use of 767 AF in 1972 cannot be verified. (Appellate Decision D0D034281, fn 2 at p.8.)

29-33
Con't.

34. In discussing its concerns about the County’s Groundwater Management Ordinance and the County’s determination that USG has a priority use for 767 AF/Y as a “historical user”, the Court stated:

... However, USG has admitted that it has no data to back up this use, which occurred in 1972. More troubling is that Bookman-Edmonston, USG’s own experts, could not reconcile USG’s reported water use to USG’s production records for the years 1970 to 1975, which are the years in which USG reported its highest water use. (Fn 4) Bookman-Edmonston found the amounts USG reported were 70 percent greater than the amounts calculated from the production reports. If we reduce USG’s 1972 water use by 70 percent, it would have a priority of only 451 AF as an historical user. (Emphasis added.)

29-34

4 **USG’s reported use of water in the years from 1970 to 1975 is, in order: 668, 575, 767, 638, 691, 614 AF. The next highest year is 1969, during which USG reported using 560 AF. USG’s average use of water during those five years is 659 AF. If we reduce that average by 70 percent, as suggested by Bookman-Edmonston, the average becomes 338 AF, an amount almost equal to its 1996 use of 367 AF. (Emphasis added.) (Appellate Decision D0D034281, text and footnote 4 at p.. 15.)**

35. The conclusion of the Court is further supported by the footnote on a table submitted by USG and appended to a 1/9/97 letter from USG Plaster City’s Plan Engineering Manager and included for public distribution in an “EEC Original Pkg” for USG plant expansion preliminary environmental review by the County. That table is entitled “United States Gypsum Company Plaster City Plant Historical County Water Use Records” from 1966 to 1996. This table contains the following footnote:

From 1996 to 1982 the water use figures are based upon flow meter readings. The water use figures from 1981 to 1976 are estimated values based upon several variables including plant board production records. The water use figures from 1975 to 1996 were based on current data and were reported to the United States Geological Service. **The data used to determine these older water use levels have not been located.** (Emphasis added.) (USG table in EEC Original Pkg with fax notation at top of page 10/10/98 09:19 Fax 213-623-0824 McClintock/Westin.)

29-35

36. Therefore, no significance should be accorded to the BE06 and BE 04 reports references to 767 AF/Y” or the USG USG DRAFT EIR/EIS 4/06 repeated references to some purported “recorded high of 767 acre-feet per year” (USG DRAFT EIR/EIS 4/06 at 2.0-

29-36

18, 2.0-32, 2.0-69, 3.3-38) Do we think this is a big issue? No doubt about it!

29-37

37. How convenient that the old data for water usage could not be found in 1998 and apparently has not been “found” yet. (DEIR Table 3.3-4 at p. 3.3-28) The company offers no explanation for why it pumped almost 200 acre-feet per year more in 1972 than it did in 1971 or how it has been able to maintain its level of production without using that quantity of water either before or since 1972. From the perspective of the public and groundwater users in the Ocotillo/Coyote Wells groundwater basin, one must question whether this level of pumpage was fact or whether it was the number used by the company to assert a high-level of usage and presumably assert some sort of pre-existing rights.

29-38

38. The USG DRAFT EIR/EIS 4/06 states that: “The Proposed Action anticipates increasing groundwater pumping from the existing wells up to a maximum of 767 AF/Y (the amount reported by USG in 1972).” (USG DRAFT EIR/EIS 4/06 at 3.3-1.) (To what agency was this purported usage reported and when?) Since USG provided no written justification for the increase in purported estimated water usage of 575 AF/Y in 1971 to 767 AF/Y in 1972 that it reported to USGS or why the numbers it reported to USGS did not match production data. That plus the fact that USG never recorded its water usage with the State or County in the manner required by law, there can be no assertion that 767 AF/Y represents any rights to export groundwater from the overlying parcels on which it is pumped. Such unnecessary pumpage of any quantity in such excess is detriment of the correlative rights of nearby overlying domestic users and nearby undeveloped parcels zoned for residential usage.

29-39

39. Citing the Appellate Court Fn 4 at p. 15: **“If we reduce that average by 70 percent, as suggested by Bookman-Edmonston, the average becomes 338 AF, an amount almost equal to its 1996 use of 367 AF.”** Interestingly this is 400 AF/Y less than the amount of groundwater anticipated by the Proposed Action subject of the USG DRAFT EIR/EIS 4/06! BE 96 at p. 6.2 indicates that USGS had/has only 3 active wells, but the public does not get proper identification for these wells until the end of the DEIR hydrology section at Table 3.3-10 at p. 3.3-85.

29-40

40. USG DEIR/EIS 4/06 Table 3.3-4 at 3.3-28 and text at USG DEIR/EIS 4/06 3.3-29 reveal the large discrepancy in production based groundwater use and the significantly higher use that was reported to USGS noted by the Appellate Court. It is the highest figure of 767 AF/Y reported, but unsubstantiated by production records (which say 451 AF/Y), that USG repeatedly asserts as some use to which it erroneously apparently claims a prior right. USG DEIR/EIS 4/06 Figure 3.3-8, “Annual Water Production.” at USG DEIR/EIS 4/06 3.3-31 and USG DEIR/EIS 4/06 Table 3.3-4 at 3.3-28 reveals just how much this over reported or exaggerated claim noted by the Appellate Court really was. How polite of the USG DEIR/EIS 4/06 at 3.3-29 to call the inflated water use claim the “U.S. Gypsum Variance”. A review of USG DEIR/EIS 4/06 Table 3.3-4 at 3.3-28 for the years for which USG reported its highest groundwater use production records reveal that for that 6 year period, production at the factory was significantly lower than for the 6 previous years. What is the explanation?

41. USG DRAFT EIR/EIS 4/06 at 2.0-45 fails to provide water quality information for existing wells at the quarry site. **29-41**
42. USG DRAFT EIR/EIS 4/06 (at 2.0-46) list of “Objectives” for the Plant includes “Sustain an adequate water supply for manufacturing operations: and Replace an existing deteriorating water pipeline with a new pipeline.” It is shocking to note that there is no written concern about mitigating or reducing potential adverse impacts of the USG’s intended increased groundwater usage on the existing groundwater dependent community and the potential need for a moratorium on all future residential groundwater dependent development if and when water levels decline and water quality is degraded especially within the downgradient community of Nomirage. **29-42**
43. USG DRAFT EIR/EIS 4/06 ignores the 4/4/06 service agreement between IID and USG for IID to provide up to 1000 AF/Y of Colorado River water from the Westside Main Canal via pipeline about 4 miles to the Plaster City site. Additional discussion of this issue is provided by other commenters. **29-43**
44. USG DRAFT EIR/EIS 4/06 2.5.2.1 (at 2.0-47) provides no justification for replacing an 8 inch gravity flow water 8.5 mile pipeline with a 10 inch water line. Nowhere is there any indication that flowmeters would be placed at the well-heads to monitor or limit groundwater use if such an increase in groundwater usage were to be permitted. There must be more discussion of the Colorado River alternative as a reliable long term supply for the USG facility or more serious consideration of the partial use of Colorado River water for use above 400 AF/Y of groundwater. This Alternative is discussed in Section 2.6.3 at p. 2.0-70. The water service agreement between IID and USG referenced as needing approval (USG DRAFT EIR/EIS 4/06 at 2.0-70) had already been approved by both parties on 4/4/06, prior to the release of the USG DRAFT EIR/EIS 4/06 for public review! In light of this agreement and past actions approving a right of way for the pipeline to transport the water from IID, text at USG DRAFT EIR/EIS 4/06 20-73 and 20.74 suggests that USG is not seriously interested in using water to be provided by IID. Failure of the County Planning Director to schedule a LAFCO meeting related to this agreement creates additional concerns in the view of the public. **29-44**
45. The **Full use of water from IID** (USG DRAFT EIR/EIS 4/06 Sec. 2.6.4) is realistic in light of the 4/4/06 IID/USG agreement to provide up to 1000 AF/Y of Colorado River water, even more than the stated desired amount of groundwater usage. In light of this agreement which was acknowledged by attorneys for USG at the 5/18/06 meeting with Hamilton and Harmons, there should be little or no credibility given to the USG DEIR/EIS 4/06/EIS text asserting that “the legal, social, political and economic feasibility of obtaining Colorado River water pursuant to a service agreement with IID is unknown at this time..” (USG DEIR/EIS 4/06/EIS 2.0-77.) And, yes, we do understand that the USG USG DEIR/EIS 4/06/EIS was distributed for review six days after the USG/IID **29-45**

agreement, which most assuredly had been in discussion for many months if not years, presumably with full knowledge of the preparers of the USG DEIR/EIS 4/06. We believe there should have been such discussions following the language of the ONCAP and the Court requirement for preparation of an EIR.

29-45
Con't.

46. Accordingly, 4/06 USG DEIR/EIS 4/06 Partial Use of water from IID Alternative (Sec. 2.6.3) and Full Use of water from IID Alternative (Section 2.6.4) (at pages 2.0-73 and 2.0-77) assertions that it “would likely require a minimum of one to three years” to get all necessary approvals and a service agreement with IID is erroneous or misleading at best. Consequently, the USG DEIR/EIS 4/06 4/06 at 2.0-73 and 2.0-77 assumption “that IID water would not be available for use at the plant at least 2008 or 2010” is similarly not credible.

29-46

47. USG DEIR/EIS 4/06/EIS 4/06 and the technical Appendix on Groundwater ignore the groundwater, public/private land ownership distribution, and residential uses that are such important issues for any discussion of groundwater usage and potential impacts within the Ocotillo-Coyote Wells Groundwater Basin/Sole Source Aquifer. To ignore these issues and repeatedly ignore the specific provisions of the ONCAP violates both the letter and spirit of CEQA and NEPA. This is especially critical because the USG DEIR/EIS 4/06/EIS fails to provide any meaningful discussion of the cumulative impacts of the proposed project on **full build-out** and development of the approved overlying subdivisions already existing on the 15,000 acres of private lands within the basin. Furthermore, the USG DEIR/EIS 4/06/EIS fails to provide any meaningful discussion of whether or not such off parcel USG industrial use of groundwater exported or transported from the parcels on which it is pumped to the Plaster City site more than 8 miles to the east is consistent with the intent and concerns of ONCAP. (USG’s use of Ocotillo -Coyote Wells Basin water at its Plaster City factory is known as “**off-basin use**” per the County Groundwater Management Ordinance. That ordinance had not ever been implemented by 4/00 and following recent inquiries to the County, it still has not ever been implemented.)

29-47

48. A General Plan (and ONCAP which is incorporated into the “Mandatory Land Use Element” of the 1993 Imperial County General Plan) is the Constitution for Development in State of California. In California the General Plan is the single most important planning document and the California Supreme Court has concurred that the General Plan is the “constitution for all future developments” within the city or county” to which any local decision affecting land use and development must conform. (*Citizens of Goleta Valley v. Board of Supervisors*, (1990)52 Cal.3d 533, 570.) (Cited in Curtin’s California Land Use and Planning Law, 1993 edition at p.6-7.) All Zoning and ordinances must be consistent with a legally adopted adequate general plan and cannot be interpreted in any manner not consistent with the general plan and the elements thereof.

29-48

49. Neither County nor Court nor the DEIR can accord interpretation of an ordinance a greater weight or superior in the hierarchy to the clear language of the County’s “Constitution for all future development”, its adopted General Plan of which the Land Use Element and ONCAP are explicitly a part. Thus, the County cannot ignore the requirements of ONCAP for site-specific geohydrology studies to determine local impacts of pumpage in excess of 5 acre feet/year for smaller projects simply because USG

29-49

employs a large number of people and provides tax revenue and USG seeks to expand its operations at low cost. (See USG DEIR/EIS 4/06 Section 1.2 "Purpose and Need for the Proposed Action at p. 1.0-15 to 1.0-17.). Additionally, the USG DEIR/EIS 4/06 cannot ignore the specific provisions of the ONCAP in calculating potential current groundwater use impacts or impacts of the proposed use at build-out of the community.

**29-49
Con't.**

50. Ocotillo/Nomirage Community Area Plan (ONCAP) approved by the Imperial County Board of Supervisors April 26, 1994 as Part of the Imperial County General Plan specifically states that:

29-50

"Preservation and conservation of groundwater is one of the major concerns of the Ocotillo/Nomirage Community Area Plan. Water use, quality, quantity and protection are key issues in planning for the area. All land-use proposals shall be reviewed to determine their impacts on groundwater quantity and quality."
(ONCAP p. 4.)

51. Under ONCAP statement of Goals and Objectives, the purpose for the development of ONCAP to be consistent with the 11/93 General Plan is clear. "The Goals and Objectives, together with the implementation Programs and Policies in Chapter IV, are the statements that shall provide direction for private development as well as government actions and programs. The Ocotillo/Nomirage Community Area Plans Goals and Objectives are intended to serve as long-term principles the policy statements representing ideas which have been determined by the citizens as being desirable and deserving of community time and resources to achieve. These Goals and Objectives are important guidelines for land-use decision making. It is recognized, however that other social, economic, environmental, and legal considerations are involved in land use decisions and that these goals and Objectives should be used as guidelines but not doctrines" (ONCAP at p. 8.)

29-51

52. Under ONCAP's discussion "Protection of Environmental Resources", Goal 5 is to "Preserve significant natural, cultural, and community character resources, air quality and water quality." (ONCAP p. 9.)

Objective 5.3 Protect the groundwater in the Ocotillo/Nomirage Community Area from overdraft and saline conditions.

Objective 5.4 Ensure that new development proposals to not contribute to overdraft or increase salinity of groundwater.

Objective 5.5 Eliminate agricultural zoning and commercial agricultural land uses within the Ocotillo/Nomirage Community Area.

Objective 5.6 Prohibit the development of new RV and mobile home parks unless development can show through a geohydrology study that adequate water would be available for the project and remain available for public use.

Objective 5.8 The County will work with U.S. Gypsum and the Imperial Irrigation District to examine other water sources that can be used at the USG manufacturing plant and reduce their dependence on groundwater. (In 1998 Planner Minnick stated no knowledge of the status of such investigations.)

29-52

Objective 5.9 Prohibit land uses which consume large quantities of water such as golf courses, water theme parks, aquaculture etc.
Objective 5. 10 Impose a limit of 1.5 acre-feet of water per dwelling unit in the Ocotillo/Nomirage Community Area. (ONCAP at p. 10.)

29-52
Con't.

53. It is of further interest to note that in its discussion of Community Vision Goal 7 is to "Achieve balanced economic and residential growth while preserving the community's character and natural resources."

29-53

"Objective 7.1. Maintain and improve the quality of life, the protection of property and the public health, safety, and welfare of the Ocotillo/Nomirage Community Area." (ONCAP at p. 11.)

54. In ONCAP's discussion of implementation programs and policies, "A **site-specific geohydrology study** is required if a proposed major subdivision is to be served by groundwater." is included under the Residential Development Standards for the following land-use designations: desert residential, low density residential, and residential. (ONCAP at pp. 14, 15, and 16.)

29-54

55. Under the development standards for the Commercial Land Use Designation, ONCAP states that: "A **site-specific geohydrology study is required if a proposed commercial development is to be served by groundwater and the amount of water requested exceeds five (5) acre-feet per year.**" (ONCAP at p. 17) There is no special discussion of industrial land-use designations within ONCAP or any authorization for industrial activity within other land-use designations, in part, to protect the underlying sole source aquifer. Nor does ONCAP text suggest that pumpage for use off basin should be authorized without environmental studies, especially if the proposed pumpage increase is 400 AF/Y, or water export increasing from the 1998 amount of 367 AF/Y to 767 AF/Y. Because a site specific geohydrology study must be prepared for if other projects proposed to use 5 AF/y or more, then it is even more imperative that site specific studies be prepared for the much larger USG proposal to more than double its export by increasing export by 400 AF/Y to 767 AF/Y (1998 proposal).

29-55

56. USG's 6/7/01 fax stated a current level of pumpage at 400 AF/y and asserts that the County has approved 767 AF/Y, a number which the Appellate Court in Sierra Club v. Imperial County re US Gypsum (Decision in D0D034281 at p.8) noted that could not be verified as previous usage. Thus, even though USG asserts an approval of 767 AF/Y, there is no credible basis to support such historical usage. (See also DEIR Table 3.3-4 at p. 3.3-28 .) Furthermore, any approval based on a historical maximum pumpage was vigorously opposed during the Groundwater Ordinance review process.

29-56

57. ONCAP discussion of Implementation Policies and Programs states that:
"Implementation of the Ocotillo/Nomirage Community Area Plan is intended to be a continual process involving amendments to the County Zoning Ordinance and Zoning Maps, and discretionary review of proposed conditional use permits,

29-57

mining permits and reclamation plan; and establishing ministerial review procedures to ensure that proposed development will not cause an overdraft or increased salinity, has adequate sewage disposal, and to determine that no hazard to public health or safety will result from flooding, earthquakes, unstable soil or other natural hazards." (ONCAP p. 21.)

29-57
Con't.

58. "1. Agriculture Policy "Commercial agricultural practices due to the use of large quantities of water and the application of pesticides and fertilizers, are not compatible within the Ocotillo/Nomirage Community Area Plan due to the potential to cause and overdraft of the groundwater aquifer, increased salinity were increased risk for contamination to groundwater. 11 (ONCAP at p. 21.)

29-58

59. ONCAP further states that commercial agriculture existing at the time of the adoption of ONCAP will be considered a legal pre-existing nonconforming use the of the land to be, maintained and continued provided there is no expansion of the non-conforming use and "no increase in the use of groundwater for irrigation." (ONCAP p. 22.)

29-59

60. In the implementation policy for commercial development ONCAP states that: **"It is the intent of the Plan to maintain the existing character of the community by discouraging regional commercial lands uses in order to preserve groundwater resources from overdraft and contamination."** (ONCAP at p. 22.) Thus, if commercial development must be discouraged to protect community character and preserve groundwater from overdraft and contamination, it is both logical and imperative to restrict industrial export of groundwater to preserve the groundwater resources from overdraft and contamination according to our interpretation of the strict language of ONCAP! This is true because Colorado River water for industrial purposes can and may be obtained from the IID's Westside Main Canal as confirmed by the 4/4/06 IID/USG agreement.

29-60

HYDROLOGY

USG USG DEIR/EIS 4/06/EIS 4/06 Vol I Sec. 3.3 Hydrology and Water Quality and USG USG DEIR/EIS 4/06/EIS 4/06 Vol II Appendices B1 (USGS data) and B2 the Bookman-Edmonston 2004 update of its 1996 report..

61. It is difficult to correlate information in the technical appendices with that of the USG DEIR/EIS 4/06 because of inconsistencies in mapping, tables and data presentation. Our apologies for any confusion in our responses trying to combine responses to information in the DEIR itself and information in hydrology Appendices.

29-61

62. USG DEIR/EIS 4/06 Fig. 3.3-1(DEIR at 3.3-2) "Groundwater Location Map" is misleading because it indicated a large number of "streams" which are really only really

29-62

- dry washes or dry washes through canyons that have running water only during heavy precipitation events. The preparer of these comments has been a permanent resident of the basin since 1977 and has only on rare occasions observed water in some of the washes following heavy rains where precipitation fell faster than it could soak into the soil. **29-62 Con't.**
63. Later the DEIR correctly states that: “Surface water is not present within the Basin....” (DEIR at 3.3-26.) Fig. 3.3-1(DEIR at 3.3-2) “Groundwater Location Map” must be corrected to reflect that there are no surface waters within the basin. **29-63**
64. The written description of the groundwater basin un Sec. 3.3.2.1 under Climate (DEIR at 3.3-5) is inconsistent with the basin as depicted in Fig. 3.3-1(DEIR at 3.3-2). The written text describes the eastern boundary of the basin as being the IID’s Westside Main Canal. **29-64**
65. DEIR fails to include the rainfall data from USGS rainfall monitoring station(s) within the basin and considers only NOAA data (DEIR 3.3-5 and 3.3-6). Why? It would be of interest to ascertain whether and to what extent there is a difference in the rainfall data reported to NOAA and that measured by USGS. **29-65**
66. The rainfall data in DEIR Fig 3.3-2 Annual Water year precipitation for Ocotillo (at 3.3-7) is of interest because visually it appears that during the years of increased TDS levels in well 25K2 there were several years of above normal rainfall. However, water year precipitation figures in DEIR Table 3.3-2 suggests that these were years of lower than average rainfall. However, these same years of monitored water quality 88-89 were the years of increased TDS in well 30R1 in its 2 year lag following increased USG export pumpage described elsewhere in this response. Table 3.3-2 does not appear to correlate with the Graph in Fig. 3.3-2. **29-66**
67. It is difficult to believe that there is any significant or any recharge at all of “0.02 inches per year of direct recharge from precipitation that falls on the valley floor” (DEIR at 3.3-12) given the depth to the water table (DEIR 3.3-12) and the extremely dry soils with an evaporation rate of approximately 100 inches per year (DEIR 3.3-6). Recharge from runoff in the mountains was estimated at 1077 AF/Y (DEIR at 3.3-12 and 3.3-17 citing BE04) **29-67**
68. The Technical Appendices B1 and B2 for Hydrology have extremely poor quality maps or Figures and are unacceptable for a USG DEIR/EIS 4/06/EIS technical appendix. Indeed they are of such poor quality it is not possible for someone like Harmon who is familiar with the groundwater resource issues to “read” the maps. In Appendix B1 USGS Hydrologic Data., the figure purportedly depicting locations of wells sampled for water quality in the Ocotillo-Coyote Wells Basin in SW Imperial County CA contains an incomplete map title, fail to indicate where in the world the wells are located, and show no difference in the legend between current and historic monitoring wells. Rather than depict both with filled in circles, either current or historic wells should have been depicted with a different symbol such as a triangle or a square. The map fails to indicate **29-68**

- Township, Range or sections to help locate wells in relation to the USGS well identification system used in the following tables of USGS water data and in the table of monitored wells with USGS identification numbers. At least one map should have been of a scale where at least the last numbers and letters of the USGS code could be placed next to the well location on a map... **26-68 Con't.**
69. The second Hydrology Appendix B1 USGS map with the identical title appears to cover the entire County. However the map is of such poor quality that most information for the groundwater basin in the Ocotillo area is lost in a grey smear. There is no difference between the black circles in the legend for both current and historic wells. The third USGS map is no better than the others. It has an incomplete title and a useless legend. **26-69**
70. USGS is the agency of the federal government that produces fine quality topographic maps. But one would never guess that from looking at maps in Appendix B1. These Appendix B1 maps either (a) reflect extremely poorly on the technical and cartographic skills of current USGS employees in the water resources division, (b) represent the failure of the preparers of the USG DEIR/EIS 4/06 to review materials prior to release for public review, or (c) represent an intent to mislead or confuse the public and decision-makers by providing useless “maps” depicting locations of current and historic monitored water wells. Did any representative from USGS or BLM (a sister agency within the US Department of Interior) have the opportunity to review the USGS maps in Appendix B1? If not, why not? Appendix B2 at p. 1-2 suggests that USGS did review the purported USGS maps and other hydrology documents. If so, were the recommendations of USGS considered prior to printing the USG DEIR/EIS 4/06 Appendices volume? **26-70**
71. USGS list of wells monitored for water quality provides no explanation for well 26F1 as an alternate well. Alternate for which well and why? **26-71**
72. USGS is still monitoring for both water quality, water level and rainfall. Information should include the most up to date monitoring from USGS. The USGS data fails to indicate that there has been an ongoing rainfall/recharge monitoring by USGS in the basin. Why? Where is the data from that USGS monitoring program. Harmon knows the location of one USGS rainfall gage, but is uncertain of the location of other rainfall monitoring stations within the basin or within the County. **26-72**
73. The grammar of a long run-on sentence (at BE04 p. 1-10 leaves questions about whether there were actually a number of studies by BE or merely a variety of different data which were obtained from the single pumping test on one of the USG wells during Thanksgiving 2002. Rereading the sentence more than a dozen times provided no clues. **26-73**
74. The answer may be that: “Groundwater levels and quality data, and their subsequent discussions in Bookman-Edmonston (1996), have not been modified or changed.” (BE04 at 3-6) We interpret this to mean that the incorrect information underlying data **26-74**

interpretation contained in BE 96 has not been corrected and therefore errors of interpretation still remain.

29-74
Con't.

75. Specifically related to studies, USG USG DEIR/EIS 4/06 4/06 Appendix B-2 the BE 2004 “update” of the 1996 BE report (BE04 at 1-1) states that:
B-E ... conducted further studies and assessment of the Basin to address the transmissivity and storage coefficient issue, **a pumping test was conducted on one of U.S. Gypsum wells** . This test occurred during a plant shutdown for maintenance during Thanksgiving 2002. This pumping test generated useful data including pumping and recovery measurements to help evaluate Basin conditions.” (BE04 at 1-3).

29-75

76. (However, BE04 Figs. 3-1 and 3-2 following BE04 p. 3-1 and USG USG DEIR/EIS 4/06 Fig. 3.3-4 “Location of Wells” at USG DEIR/EIS 4/06 p. 3.3-15, and USG DEIR/EIS 4/06 Fig. 3.3-3 reveals that the USG wells are centrally located between the residential communities of Ocotillo and Nomirage.) We believe that the pump tests on the USG well provides information about that well and that localized portion of the basin only and cannot be used to make basin wide conclusions or predictions.

29-76

77. How is it possible to draw any basin wide conclusions about different or distant portions of this geologically complex basin when the pump test is performed on a single well in the portion of the basin with high potential recharge and yield? Nearby wells have very different quality of groundwater and much lower yield (Nomirage) or similar quality but lower yield (Yuha). Is it possible that the yield of wells in Nomirage and Yuha would be greater than recorded if pumping for export of such a large quantity of groundwater by US Gypsum had not intercepted and exported the water before it could reach wells in Nomirage and/or Yuha?

29-77

78. In the list of persons contacted (BE04 at 1-3), the omission of Dr. David Huntley, SDSU Professor Emeritus is a serious omission! This is because **Dr. Huntley served as Imperial County’s consulting groundwater geologist from 1979 to 1993 for issues related to export of groundwater to Mexico from a well in Ocotillo and a well in Yuha**. Dr. Huntley served as the County’s expert hydrologist in legal proceedings on groundwater export to Mexico. He also prepared a letter in 1993 which was critical of USG’s then proposed increase in groundwater export pumping. Huntley’s 1993 letter related to the proposed increased USG export pumping is not cited in the BE04 reference section, however, his concerns about export pumping to Mexico is the subject of his 1979 report. Dr. Huntley has retired and lives in the San Diego area.

29-78

79. Unfortunately many USGS monitoring wells have been dropped from the monitoring program. However, the 2001 USGS groundwater monitoring data in USG USG DEIR/EIS 4/06 /EIR 4/06 support the **1993 conclusions by Dr. Huntley that “None of the water level hydrographs in the Ocotillo area ... show any response to the decrease in groundwater production by U.S. Gypsum.”** Groundwater levels are continuing to decline in the Ocotillo area

29-79

downgradient of the export pumping by USG. "GROUNDWATER LEVEL INFORMATION SUGGESTS THAT LOCAL OVERDRAFT CONDITIONS CONTINUE TO EXIST WITHIN THE OCOTILLO-COYOTE WELLS BASIN, DESPITE DECREASES IN PRODUCTION FROM WELLS." [HUNTLEY 1993, P.2 EXHIBIT 17]

29-79
Con't.

80. THEREFORE, DR. HUNTLEY'S 1993 RECOMMENDATIONS REQUESTED BY AND SUBMITTED TO IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT ARE STILL VALID. HUNTLEY'S 1993 RECOMMENDATIONS INCLUDE:

29-80-1

1. U.S. GYPSUM SHOULD BE REQUIRED TO PUT DISCHARGE METERS ON ALL SIX OF THEIR WELLS AND REPORT DISCHARGE FIGURES FROM EACH INDIVIDUAL WELL ON A QUARTERLY BASIS.

2. UNTIL ADDITIONAL DATA ARE GATHERED, U.S. GYPSUM SHOULD LINK INCREASES IN PRODUCTION TO WATER SAVINGS SUCH THAT THEIR TOTAL GROUNDWATER PRODUCTION SHOULD NOT EXCEED 380 ACRE-FT/YR.

29-80-2

3. ANY WELLS SAMPLED IN OR AROUND 1976 THAT STILL EXIST NEAR THE OCOTILLO AREA SHOULD BE RESAMPLED AND ANALYZED FOR MAJOR CHEMISTRY (CONSISTENT WITH U.S. GEOLOGICAL SURVEY ANALYSES). EFFORTS SHOULD FOCUS ON AREA BETWEEN OCOTILLO AND THE FRESH WATER/SALINE WATER TRANSITION ZONE.

29-80-3

4. BECAUSE NO MONITORING WELL EXISTS BETWEEN WELL 16S10E30RI AND OCOTILLO, AT LEAST THREE ADDITIONAL MONITORING WELLS SHOULD BE DRILLED BY U.S. GYPSUM ALONG A LINE BETWEEN 16S10E30RI AND 16S9E36HI. THE WELLS SHOULD BE DRILLED AND COMPLETED TO DEPTHS CONSISTENT WITH THE PRODUCTION WELLS IN THE AREA. THESE WELLS, ALONG WITH U.S. GYPSUM WELLS #4 AND #6

29-80-4

SHOULD BE ADDED TO THE U.S. GEOLOGICAL SURVEY WATER LEVEL MONITORING NETWORK AND THE WATER QUALITY MONITORING NETWORK. FOR THE FIRST TWO YEARS, THEY SHOULD BE MONITORED QUARTERLY.

29-80-4
Con't.

5. WELLS NEAR OCOTILLO SHOULD BE RETURNED TO A YEARLY WATER QUALITY MONITORING SCHEDULE.

29-80-5

6. THE RESULTS OF THE WATER PRODUCTION, WATER LEVEL, AND WATER QUALITY MONITORING SHOULD BE REVIEWED AND SUMMARIZED ON A YEARLY BASIS AS TO BASIN RESPONSES TO CHANGES IN PRODUCTION, CHANGES IN RECHARGE, AND RESULTING WATER QUALITY CHANGES.

29-80-6

7. ANY U.S. GYPSUM PERMITS FOR INCREASED GROUNDWATER WITHDRAWAL BEYOND 380 ACRE-FT/YR, SHOULD CONTAIN A CONDITION THAT ALLOWS THE COUNTY OF IMPERIAL TO MODIFY THAT PERMIT IF DEGRADATION IN WATER QUALITY IS OBSERVED IN ANY OF THE NEW MONITORING WELLS RECOMMENDED IN (4) ABOVE OR IN ANY OF THEIR ACTIVE PRODUCTION WELLS. [HUNTLEY'S 1993 LETTER TO APCD RE CONCERNS ABOUT USG'S PROPOSED NEW WALLBOARD LINE #1.](AR 5:1074-1075)

29-80-7

81. The USGS 1977 report also had stated that:

"Because groundwater is the sole source of supply in the basin, most development has directly affected the ground-water resources. There has been a steady-state decline in the water level which has accelerated in the last 10-12 years because of increased pumpage This constitutes mining of the groundwater; unless conditions [change], water levels will continue to decline." (USGS 1977 Report p. 3 5.)" [SC 12/4/9 8 Ltr p.8] (AR 5:1047.)

29-81

82. BE04 reference section (at p. 1-3, 1-4) **also fails to list the US EPA Sole Source Aquifer (SSA) designation.** BE04 uses the pre EPA SSA hydrological rather than political boundaries of the basin which incorporate a new description of the geology of the basin based on faulting (BE04 at p. 3-4 and BE04 Fig. 3-2). BE04 reverts to the old political boundaries and includes everything west of the Westside Main Canal to the Laguna Salada Fault (BE04 Fig. 3-1), an area of highly saline non-potable water. Why?

29-82

So BE 04 could state that the potable groundwater is not really being exported from a sole source aquifer?

29-82
Con't.

83. BE04 at 1-1 states that: "About 23 wells are measured semiannually." However, many of the wells that were previously monitored have been dropped from the program. There is no explanation as to why there was no effort made to remeasure water levels in all the wells for which data had been obtained for the 1977 USGS Skrivan report on the basin. Such wide spread remonitoring could reveal what if any changes had occurred both upgradient and downgradient of the three centrally located USG export pumping wells during a period of 30 years.

29-83

84. **DEIR Table 3.3-3A (at p. 3.3-18) omits information from the USGS data on water quality monitoring wells and has incorrect well identification information for the seven wells** in Table 3.3.3A (at p. 3.3-18) with identifier numbers beginning with the number 11. All wells in the 11 series are located in T17S R10 E not 16S/9E. The last 7 wells are located in Yuha not the Ocotillo-Nomirage area. Harmon (at well 17S/10E-11H3) is familiar with the USGS well identification system, familiar enough with the monitoring results to recognize at least some errors, and has reviewed the USGS data in Appendix B1. Accordingly, we do not believe that the information from USGS was/is accurately reported.. It is of great interest to note that DEIR Table 3.3-3A (at p. 3.3-18) omits listing six (6) of the 11 (eleven) water quality monitoring wells listed in the USGS data in DEIR Vol II Appendix B1. Why??? The following water quality monitoring wells listed in Appendix B1 p. 4 for USGS data that were not included in DEIR Table 3.3-3A (at p. 3.3-18) are: 16S/9E-26F1, 16S/9E-34B1, 16S/9E-36C2, 16S/9E-36D3, 16S/10E-30R1, and 16S/10E-42A8. Noting these errors makes it difficult to believe that anyone proofed the hydrology section or that anyone from USGS had the opportunity to review the document, or if reviewed by USGS that comments from USGS were considered.

29-84

85. DEIR hydrology text and Tables omit data for six (6) of the USGS monitoring wells identified in DEIR Vol. II Hydrology Technical Appendix B1 from the DEIR Table 3.3-3B at 3.3-25 and DEIR Table 3.3-5 at DEIR 3.3-33, Given the omission of the USGS water quality monitoring data, the DEIR's water quality discussion is woefully inadequate, especially when it omits USGS water quality monitoring data from the nearest monitored well (30R1 at Coyote Wells) to a USG export well in the path of subsurface flow to the ENE across the fault zone connecting the Elsinore and Laguna Salada Faults. Why doesn't the DEIR Table 3.3-3B at 3.3-25 include the water quality data from USGS in Vol. II Appendix B1? Similarly, why does DEIR Table 3.3-5 "Summary of Well Data" at DEIR 3.3-33 fail to include the data fro the wells in the current USGS water quality monitoring program as indicated in USGS data in Vol. II Appendix B1? Why did the DEIR choose to report on one set of water wells for water quality when USGS was monitoring different wells as part of the USG/Imperial County well monitoring program? (See DEIR Table 3.3-10 at 3.3-85.)

29-85

86. Neither BE04 (Appendix B2) nor the USGS data (Appendix B1) gives the USGS identification numbers for the USG export wells. However, a computer print-out of well data, including owners of record at the time of the 1977 USGS Skrivan Report was provided to Harmon by USGS in 1980. That print out identifies the following wells as USG wells: 16S9E-36B1 drilled in 1961, 16S/9E-36F2 drilled in 1925, 16S/9E-36F3 drilled in 1947, 16S/9E-36G3 drilled in 1952, 16S/9E-36H1 drilled in 1954, 16S/9E-36L1 drilled in 1950. Based on information in the USGS well data print-out the altitude for the land surface datum at the well is given as ft LSD and the base of each well depth in feet Above Sea Level was calculated. This information about land surface altitude and well depth from USGS data for the USG wells follows:

36B1 345' LSD and -115' ASL or 115 ft below sea level (drilled 1961); (USG #6)

36F2 LSD and ASL data not available; (drilled 1925)

36F3 432' LSD and -226 'ASL or 226' below sea level; (drilled 1947)

36G3 353' LSD and -97' ASL or 97' below sea level; (drilled 1952) (USG #4)

36H1 342' LSD and -37' ASL or 37' below sea level; (drilled 1954) (USG #5)

36 L1 427" LSD and .55' ASL, the only USG well with its base above sea-level.(drilled 1950)

87. USGS data indicate that there were 6 wells owned by USGS. Based on USGS data it appears that the well drilled in 1925 was the only well in use when "USG purchased the Plaster City facility about 1946" (BE04 at 4-2). BE 04 states that USG drilled six more production wells and abandoned three of them with a new well #6 being drilled next to the old well 6 in 1999. (BE04 at 4-2) CEQA and NEPA do not require that the concerned public ferret out information withheld, but readily available to the preparers of technical appendices and EIR/EIS documents. USG's USG DEIR/EIS 4/06 and BE04 must provide USGS local identification numbers for its wells (before the concluding pages of the hydrology section in USG DEIR/EIS 4/06 Table 3.3-10 at p. 3.3-85) and reveal the amounts of water pumped from each of its export wells so reviewers can determine the extent to which pumpage from an individual well may be impacting the nearest wells within any given portion of the large cone of depression created by USG's export pumpage for use on parcels distant from the location of wells. The public has no way of knowing which wells USG has abandoned and why, whether they have been capped and sealed per state regulations or are periodically used. Did wells have water level problems, water quality problems or water yield problems? There must have been a good reason for abandoning such wells given the cost of drilling such a large well in the basin..

88. Comparable data for two other wells of significance with regard to changes in water quality which may be related to increases in USG's export pumping are 16S/9E-25K2 the Clifford-McDougal Ocotillo well, and 16S/10E-30R1 is located at Coyote Wells. 25K2 was drilled in 1972 was 362' LSD and -8' ASL. 30R1 drilled in 1958 was 290' LSD and depth not available. Based on the full sized USGS topographic map entitled "Location of wells Ocotillo-Coyote Wells area" provided to Harmon by USGS in 1980, we estimate

that well 25K2 is less than 0.5 mi from USG well 36B1 and that well 30 R1 is approximately 1 mile ENE of USG well 36H1. 25K2 appears to be the closest water quality monitored well to USG export well 36B1. 30R1 is the closest water quality monitored well downgradient toward the fault zone from USG export well 36H1.

29-88
Con't.

89. Based on our review of the USGS monitoring data in Appendix B1, it appears that only USG well 16S9E 36H1 0.5 mi E of Ocotillo and S of Interstate 8 but no other USG wells are monitored for water quality. This is a very serious monitoring omission based on the fact that **increasing TDS in several wells (16S/9E-25K2 and 16S/10E-30R1) appears related to the years in which or following which USG increased its export pumping from the portable wells in the Ocotillo area to the factory at Plaster City** according to BE04 Table 4-2 at p. 4-3..

29-89

90. BE04 notes that: "Well number 16S/9E-25K2, which exported water to Mexico from 1967 to 1984, showed two periods of increasing and decreasing TDS levels. The TDS fluctuation observed in this well correlates with increased pumping for water export to Mexico." (BE04 at 2-2) Since this well probably never pumped more than 150 AF/Y, with the exception of the 3 years indicated in BE04 Table 4-4 (at BE 04 p. 4-7), specifically, 1975, 1976, 1977. Comparing the data in BE Table 4-4 for export pumpage from well 25 K2 to Mexico with BE Table 4-2 "Historical US Gypsum well production" (BE 04 at 4-3) it is obvious that well 25K2 most certainly never pumped as much water as the combined pumpage of the USG wells.

29-90

91. Based on a review of the USGS water quality monitoring data for well 25K2, we question the BE 04 text or conclusions at p.2-2. The USGS data from Appendix B-1 for well 016S009E25K002S actually reveals that the two periods with the highest TDS levels were 1988 and 1989 and 2001, both periods after well 25K2 ceased its export to Mexico in "about 1984" (BE 04 at 2-2, and USG USG DEIR/EIS 4/06 3.3-28, 3.3-30, and 3.3-46.). For export well 25K2 in 1972 the TDS was 253; TDS was 405 in 3/88, 393 in 3/89, and 386 in 3/01. (USGS data, USG USG DEIR/EIS 4/06 Hydrology Appendix B1.) 1988-89 (1.14") and 1989-90 (2.38") were years of lower rainfall according to USG DEIR/EIS 4/06 Table 3.3-2 USG DEIR/EIS 4/06 at 3.3-10.

29-91

92. For well 25K2, the years of high TDS do not correspond to the years of high export pumpage from this well to Mexico as asserted by BE 04 at 2-2. However, the high TDS levels in well 25K2 (USGS data) for years 1988 and 1989 do correspond and lag behind the 3 years of high export pumpage from USG wells to Plaster City from 1986 to 1988 as indicated by Table 4-2 at BE04 p. 4-3! In 1986, 1987, 1988 USG exported more than 500 AF/Y from its wells unmonitored for water quality by USGS. In 2001 USG increased its export pumpage 110 AF/Y higher than in 2000, and in 2002 USG increased pumpage by an additional 100 AF/Y and exported 533 AF/Y to Plaster City. We interpret this to mean that USG's export of groundwater to Plaster City from a well near 25K2 may likely have caused TDS at well 25K2 to increase even after export to Mexico at that well had stopped. As USG's export of groundwater remained in excess of 500

29-92

- AF/Y we expect that water quality data from monitored wells might once again increase as it had in the past, presumably in response to USG’s increased export. This concern is another reason why it is important to know which USG well is pumping how much water and what if any the pumping rotation schedule is. **29-92 Con't.**
93. Other USGS monitored wells with elevated TDS that may be correlated with the increased export pumpage by USG are: (a) 16S/9E-24R1 with TDS levels increased in 1988 and 1989, with no further water quality monitoring; (b) 16S/9E-24B1 recorded its highest TDS levels in 1986 through 1990. (C) However, as discussed below, the changes in water quality in well 16S/9E-30R1 near Coyote Wells are the changes that are most significant . **29-93**
94. Well 16S/9E-30R1 recorded its highest TDS in 1988, 1989 and 1990 and its highest chloride levels in those same years. **Because well 30R1 is down-gradient from the USG export wells and because it is near the fault zone it is considered significant that the years of highest TDS in well 30R1 lag two (2) years behind the three years of highest USG export pumping in the 1980s.** Because the Hydrology Appendix B1 for USGS monitoring data provides no water quality data for the years since USG once again increased export pumping above 500 AF/Y. If there is a similar two year time span to see the effects of increased USG export pumping near the fault zone, then it should appear in USGS water quality monitoring results for the years 2004, 2005 and/or 2005. **29-94**
95. This analysis should either (a) be a warning that increased pumpage from a single well may cause upconing of poorer quality water at depth, such as with the impacts on 25K2, or (b) indicate the need for extreme caution for jumping to overly optimistic assumptions about “Basin” characteristics based on a single pump test of a single apparently unmonitored USG well perhaps less than 1 mile to the SE of well 25K2 when another well, 30R1 may in fact offer a warning of adverse impacts more distant in both location and time. Why does BE04 attribute no further explanation or significance to this information from well 16S/9E-25K2 and 16S/9E-30R1, and more importantly, why does BE 04 contain no estimates of pumpage from well 25K2 between the years 1978 and when it stopped export pumping in 1984? Well 25K2 is known in Imperial County Planning and Public Works documents as the Clifford or Flickenger or McDougal Ocotillo well depending on the ownership of the export well during County proceedings from early 1970s to late 1980s to stop the export of groundwater from well 25K2. **29-95**
96. In any event, USG DEIR/EIS 4/06 at 3.3-65 discusses the measurable impact that pumping for several year at rates of 100 to 200 AF/Y on water quality in certain parts of the basin. It notes that:
 “The decrease in water quality may be due to lateral migration of higher-TDS water from areas near outcrops of Tertiary marine sediment, or vertical migration of water from or near Tertiary marine sediments underlying the alluvial aquifer throughout most of the basin.” (USG DEIR/EIS 4/06 at 3.3-65.) **29-96**

97. **Does BE04 or preparers of the USG DEIR/EIS 4/06 know where residential properties with domestic water wells are located with respect to assertions about geologic features and paved roads?** The BE04 discussion of “Folds” in Section 3 contains information about the surface and subsurface geology of the 160 acre subdivision known as Yuha Estates that raises “red flags” to Harmons, residents of Yuha Estates since 1972. The BE04 text describes an anticline formation, referencing the DeAnza Overlook on the rim of the Yuha badlands and asserts that: “The apex of the anticline is approximately located in the area of Yuha Estates.” (BE04 at 3-5.) BE04 says that: “In addition to a structural subsurface high, wells in the Yuha Estates area are located on a pronounced topographic high.” (BE04 at 3-5.) Similar text describing topographic and structural ridges in the Yuha Estates area is found at USG DEIR/EIS 4/06 at 3.3.49. **29-97**
98. USG DEIR/EIS 4/06 at 3.3-49 references “some of the deeper wells in the Yuha Estates area”, suggesting that the preparers of the USG DEIR/EIS 4/06 are unaware that Yuha Estates is merely a 160 acre subdivision with only 16 lots and only one deep well which was drilled on the same lot as the McDougal export well, but never completed because the driller encountered saline water at depth. (Water quality information for well 17S/10E-11G4 from the well driller to Harmon in 1987). **29-98**
99. USG DEIR/EIS 4/06 says that the Yuha Estates area “sits on both a topographic and structural ridge. As residents of the small subdivision for 34 years, this description of wells being on a topographic high comes as quite a shock! We thought Yuha Estates was located in a syncline, not atop an anticline. To the best of our knowledge all 10 wells in the subdivision are located in what visually looks to be a depression or sink surrounded by either rises, ridges or mountains. Many wells have had standing water surrounding them following significant precipitation or run-off events.” **29-99**
100. Indeed, the Subdivision Map and text for the Yuha Estates subdivision note that the subdivision is subject to flooding. This is because the majority of the 10 acre lots are located in a “sink”. Indeed, whenever there is heavy rainfall in the desert or runoff from the east facing canyons of the Jacumba Mountains to the west, water washes through the subdivision from the west and/or runs off the slopes to the north and east that surround the subdivision and stands in large or very large puddles on residential lots and across Hwy 98 where it passes through the subdivision. **29-100**
101. USG DEIR/EIS 4/06 3.3-50 and Fig. 3.310 reveals the extent of the impacts of export pumping from well 17S/10E- 11G1 which ceased in 1982 (almost 24 years ago) and where water levels still have not recovered to the pre-export levels. Recovery has been much slower than predicted. **29-101**
102. BE04 notes that most of the Ocotillo-Coyote Wells Groundwater Basin is “undeveloped desert” (BE04 at 4-1), but makes no mention of the fact that of the 108,000 acres of the Ocotillo/Nomirage community area (ONCA) (BE04 at 4-5) **only “approximately 15,000 acres are privately owned.”** (ONCAP p.4). The remaining **“approximately 93,000**

acres of public lands within the [ONCA] planning area” are administered by the U.S. Department of Interior, Bureau of Land Management (BLM) and therefore not available for development or dispersal of domestic groundwater extraction. (ONCAP at p.4) (See also ONCAP Fig 1 for the limited distribution of privately zoned land within the basin/ONCAP planning area. ONCAP Fig.1 depicts BLM administered lands as “Open Space”.) This information is essential to understanding the importance of localized groundwater pumping impacts on the residential community which BE04 (at 4-5) acknowledges is “dependent on groundwater” vs some purported insignificant basin-wide impact at some location distant from where private property with water wells is located.

29-102
Con't.

103. Accordingly, the estimate of 1.2 million acre-feet of water in storage throughout the Ocotillo-Coyote Wells Basin (BE04 at 3-6) is essentially irrelevant to the overlying property owners and existing domestic groundwater users. The vast majority of groundwater is located under BLM managed “Open Space” and unavailable for use by residents of Ocotillo, Nomirage, Yuha and other private parcels located in the non-open space areas of ONCAP Fig.1.

29-103

104. **BE04 fails to indicate whether the impacts of proposed increased export pumpage include or do not include full build-out** of the already subdivided residential communities of Ocotillo and Nomirage and water usage for all other overlying private parcels as already subdivided and if subdivided to the 40 acre minimum parcel size of the more remote areas as approved by the Ocotillo-Coyote Wells Community Area Plan (ONCAP) 1994. ONCAP 94 is a part of County’s General Plan. BE04 Table 4-1 at p. 4-1 is entitled **1989 Land Use** and was not updated from Table 6-1 of the BE 96 report at p. 6-1.. That means the table 4-1 on Land Use contains information that is **17 years out of date** and ignores even the information in the 1994 ONCAP related to land use and housing in the table. Why does BE04 Table 4-1 use 1989 data unchanged from BE 96 and BE04 Table 4-2 use data through 2002 when both had their origins in the BE 96 report as Tables 6-1 and 6-2? Only the table on USG water use was updated to 2002. Why?

29-104

105. With reference to BE04 (at p. 4-2) “estimate” of USG’s groundwater pumpage, the use of the word “approximately” reinforces the Appellate Court’s conclusion that USG did not have data to support USG’s asserted usage of 767 AF/Y in the past.(Sierra Club v. Imperial County, U.S. Gypsum Real Party in Interest, Court of Appeal, 4th Appellate District Case No. D0D034281 at p. 8.) Use of words like “estimate” and “approximately” suggest that at least until 1976, USG had not installed any flow-meters on the wells or pipeline from Ocotillo to Plaster City. Even after that there is no indication that the USG groundwater data was from flowmeters in BE 04. Even after flowmeters were installed, the BE04 a d Appendix B! For USGS data should reveal how much was pumped at each USG export well rather than combining pumpage from all three wells. and wells should have reports for water levels.

29-105

106. The County’s General Plan Land Use Element’s ONCAP “Objective 5. 10 Impose[s] a limit of 1.5 acre-feet of water per dwelling unit in the Ocotillo/Nomirage Community Area..” (ONCAP 1994 at p. 10.) . Using the figure of 325,851 gallons/acre-foot of water, the **ONCAP would permit groundwater usage of about 1344 gallons/dwelling unit/day**. This is far in excess of the water use rate estimates of 200 gpd/capita for Ocotillo and 100 gpd/capita for the larger lots in Nomirage and Yuha. indicated in BE 04 Table 4-3 at p. 4-4. Therefore, we conclude that BE04 Table 4-3 and underestimates the existing and/or potential groundwater use for the overlying residential communities dependent on groundwater. The USG USG DEIR/EIS 4/06/EIS must consider the amount of groundwater usage permitted by the County’s General Plan and must consider what the water usage for build-out on the 93,000 acres of private lands at the ONCAP permitted usage would be in addressing cumulative impacts . **29-106**
107. BE04 Appendix A cited at BE04 (p. 5-1) for the pump test fro well 6 (no USGS identifier number) is significant because states that: “equilibrium between recharge and discharge was not achieved and that the discharge rate exceeded the recharge rate during the pumping test.” (BE04 Appendix A at p.2) **29-107**
108. BE04 Appendix A , Plate 1 should be included in the body of the BE04 report not hidden in the Appendix and ALL wells on Plate 1 and the same figure as USG DEIR/EIS 4/06 Fig. 3.3-4 “Location of Wells” at USG DEIR/EIS 4/06 3.3-15 should use the USGS local identifier numbering system so the public can locate then on a USGS topo sheet to determine the relative locations of wells with different uses and amounts of pumpage in hopes of understanding changes in water levels and water quality in monitored wells. **29-108**
109. We apologize for the confusion of shifting between comments on the DEIR and the hydrology technical Appendices. Unfortunately, there was not adequate time to complete the review and merge relevant comments in a potentially more orderly manner. Hence, we submit the following DEIR comments without attempting to relate them to relevant sections of the BE04 hydrology appendix. More detailed hydrology comments will be submitted separately by Wiedlin. **29-109**
110. DEIR groundwater quality discussion (at 3.3-17) states that Fig. 3.7 depicts water quality in the Ocotillo-Coyote Wells Basin per the BE 96 report, yet this Figure fails to include water quality data for the area to the east of the Laguna Salada Fault in Fig 3.3-7 and of what is identified as the Elsinore Fault in Fig 3.3-6 also from the BE 96 report. Why? And why do Figures that supposedly have their origin in the same hydrology report use different names for what appears to be the same fault? **29-110**
111. DEIR at 3.3-26 suggests that there are a number of groundwater users outside the basin. Which Basin boundaries? The 1996 US EPA Sole Source Aquifer boundary, the 1977 USGS Skrivan report boundary, or the BE 96 boundary?. Does this mean users over potable groundwater vs. non-potable water or what? We know of no. other off-basin USGS other than the than the Plaster City factory site and scattered residences in West **29-111**

29-111
Con't.

Texas and Painted Gorge. DEIR must identify the users “outside of the Basin”.

29-112

112. As noted in comments on BE04 we question the estimates for “current community domestic water use” of 120 to 125 AF/Y (DEIR at 3.3-27) in light of the County’s permitted water use of 1.5 AF/Y /dwelling unit listed in ONCAP. Residents of the basin are not convinced that residents of the smaller lots within the townsite of Ocotillo use less water per capita than do residents of the larger lots in Nomirage, Yuha and elsewhere, because there is also landscaping on larger lots.

29-113

113. DEIR Table 3.3-4 (at pp. 3.3-27 and 3.3-28) fails to note if any of the “current and historic” groundwater use in the Ocotillo-Coyote Wells Basin is actually **measured (by flowmeters at well head)** export of potable water from US Gypsum wells to Plaster City or from wells to Mexico. If some years were based on flowmeter readings for individual wells as stated (at DEIR 3.3-29), what were those data for the individual USG wells for each year from 1981 to present ?

29-114

114. DEIR Sec. 3.3.3.3 on Water Level data states that: “It is not known how total [USG] water production is distributed among the three wells, and it is not possible to evaluate the overall impact of pumping by USG based on the hydrograph for [USG] well No 5 [16S/9E-36H1].” (DEIR at 3.3-49.) If the USG DEIR is supposedly an informational document for public review, why is USG withholding the pumping data for its three wells from the consultant preparing the EIR/EIS and why withholding the information from the authors of the BE 96 and BE04 hydrology reports? Alternatively, if the pumping data for each well was provided by USG staff or attorneys to the consultants, why is there such reluctance to reveal that information?

29-115

115. Groundwater use in the Ocotillo-Coyote Wells Basin with exactly the same quantity pumped each year from wells exporting to Mexico is not believable to long time residents of the basin who observed the water tank truck operations and counted water trucks.

29-116

116. Well 25K2 ceased export operations to Mexico in 1984. (DEIR 3.3-28, 3.3-30, and 3.3-46.)

29-117

117. DEIR Table 3.3-4 at 3.3-28 and text at DEIR 3.3-29 reveal the large discrepancy in production based groundwater use and the significantly higher use that was reported to USGS noted by the Appellate Court. It is the highest figure of 767 AF/Y reported, but unsubstantiated by production records, that USG repeatedly asserts as some use to which it erroneously apparently claims a prior right. DEIR Figure 3.3-8, “Annual Water Production.” at DEIR 3.3-31 and DEIR Table 3.3-4 at 3.3-28 reveals just how much this over reported or exaggerated claim noted by the Appellate Court really was. How polite of the DEIR at 3.3-29 to call the inflated water use claim the “U.S. Gypsum Variance”. A review of DEIR Table 3.3-4 at 3.3-28 for the years for which USG reported its highest groundwater use production records reveal that for that 6 year period, production was significantly lower than for the 6 previous years .

118. DEIR Tables 3.3-6A and 6B Depth to groundwater and surface elevation (at DEIR 3.3-5 through 3.3-40) are of limited value in terms of understanding the large cone of depressing related to USG’s export pumpage from three wells because the tables provide little data for nearby downgradient wells. Rather the bulk of the downgradient information comes from wells at Yuha Estates more than 5 miles downgradient of USG wells. Why don’t these tables provide data for closer down-gradient USGS monitored wells in Nomirage? **29-118**
119. DEIR Table 3.3-6C Depth to groundwater and surface elevation Area East of Coyote Wells” at DEIR 3.3-39 incorrectly suggests that wells 16S/9E -24B1 and 16S/9E -24D1 are east of Coyote Wells. The USGS locator identifier and USGS topo map provided to Harmon and BE04 Plate 1 all place these wells north of Ocotillo and north of the Palm Canyon wash on the south side of the Coyote Mountains more than 2 miles almost due north of the USG export wells. Wells 16S/10E-29H1, 29L1 and 29R2 are E and NE of Coyote Wells about 1.5 to more than 2 miles distant from the USG export wells. With the exception of wells 24 B1 and 24D1 which are monitored for water levels these Table 3.3-6C wells are not currently monitored for water quality or water level by USGS according to data in the DEIR Vol II Appendix B1 USGS Hydrology data.. Why choose the “29” wells for which monitoring was discontinued in 1985 and why not include USGS monitoring data for 24B1 and 24D1 to present? Seems bizarre. **29-119**
120. DEIR modeling discussion estimates that it would about 250 years for groundwater to flow 1 mile near the Mexican border and about 500 years for water to flow 1 mile in the area east of Coyote Wells. (DEIR at 3.3-43.) Why does the text not provide any estimates of flow rates between USG export wells and the area before the fault zone near Coyote wells and between the USG export wells and the residential community of Nomirage which relies on private domestic wells? **29-120**
121. “In the Ocotillo-Coyote Wells Groundwater Basin, the only source of recharge is seasonal rainfall runoff from the adjacent mountains.” (DEIR at 3.3-44.) This statement confirms the errors of DEIR Fig 3.3-1 depicting the Groundwater Basin Location Map at 3.3-3 which shows dozens of “streams” with blue lines. **29-121**
122. DEIR 3.3-50 and Fig. 3.310 reveal the extent of the impacts of export pumping from well 17S/10E- 11G1 which ceased in 1982 (almost 24 years ago) and where water levels still have not recovered to the pre-export levels. Recovery has been much slower than predicted. **29-122**
123. DEIR discussion of the wells in the “Area East of Coyote Wells” at p. 3.3-53, incorrectly suggests that wells 16S/9E-24B1 and 16S/9E-24D1 are located east of Coyote Wells. Understanding the USGS identification numbers and reviewing the USGS location map and USG USG DEIR/EIS 4/06/EIS 4/06 Fig. 3.3-4 reveal that these two wells are more than 2 miles NW of Coyote Wells in the vicinity of the Elsinore Fault.. That is part of the **29-123**

- problem with the maps without scales. **29-123
Con't.**
124. USG DEIR/EIS 4/06 Sec. 3.3.3.4 Groundwater chemistry data at 3.3-54 is inadequate because it fails to provide information for any domestic wells in Nomirage, the groundwater dependent residential community down-gradient and within the large cone of depression related to export pumping by USG. **29-124**
125. USG DEIR/EIS 4/06 3.3-60 discussion of water chemistry provides no explanation for omitting data from the USGS water quality monitoring well 16S/10E-30R. (See USG DEIR/EIS 4/06 Vol. II Appendix B1) at Coyote Wells. **29-125**
126. USG DEIR/EIS 4/06 Fig 3.3-16 includes no scale to indicate relative locations or distances between wells. **29-126**
127. Mitigation measure 3.3-1 (USG DEIR/EIS 4/06 at 3.3-71 and -72) related to local impacts of water depletion (Impact 3.3-1) from increased export pumping to the level reported to USGS but not based on production do not appear to be enforceable and appear discretionary, especially as we are unaware of the County's USG biased Groundwater Management Ordinance being implemented or even considered relative to any groundwater use to date by the County's Groundwater Management Committee . Mitigation measures should not be up to the choice of USG (without reference to any successor, and in the absence of any bonding to fund long-term remediation). There is no clue as to from what source any "full replacement water supply" might come or what impacts that might have if from another well w2ithin the basin. Mitigation measure 3.3-1 is not convincing. **29-127**
128. Impact 3.3-2 large area impacts from USG pumping for which there is no mitigation measures available. The USG DEIR/EIS 4/06 discussion at 3.3-73 supports our earlier concerns that though there had been estimates of a large quantity of groundwater in storage, the basin is so complex that available groundwater may be "much less than previous estimates". Additionally, private land usage so concentrated that impacts of what might be considered a relatively small overdraft could be much more serious locally in light of the fact that water levels have been declining for well more than 30 years, Based on these issues there is really no way to predict with any reliability what might happen if pumpage were more than doubled at the centrally located USG wells. (USG DEIR/EIS 4/06 3.3-75.) **29-128**
129. USG DEIR/EIS 4/06 3.3-76 dismissed impacts of a 23 to 30 ft drawdown because water levels BGS in Ocotillo are high enough that with the exception of Mesquites whose roots have been observed at depths to 165 ft., local vegetation roots do not reach the water table. However depth to water in Nomirage wells and at Coyote Wells is far less. (USG DEIR/EIS 4/06 Vol II Appendix B1, USGS data.) Therefore, vegetation and wildlife habitat in areas where water table is currently close to the surface would be impacted by the larger declining water levels contrary to the statements at USG DEIR/EIS 4/06 3.3- **29-129**

76..

130. Pumping from the aquifer for the Proposed Project:
 “will lower the water level over a broad area of the Basin. ...this lowering of water levels will be in addition to the existing condition in the basin where the water table is already declining. ... the additional decline in water levels caused by the additional pumping of 420 AF/Y for the Proposed Project can not be readily offset by decreases in pumping elsewhere in the Basin, enhancing recharge, or importing water.” (USG DEIR/EIS 4/06 at 3.3-76)
 The USG DEIR/EIS 4/06 at 3.3-77 concluded that this impact was significant, unavoidable and unmitigable.

29-130

131. Impact 3.3.3 Water quality degradation affecting individual wells owners.
 “Increased pumping from USG export wells could degrade water quality in individual wells due to lateral migration of higher TDS water from areas near Tertiary marine sediments, or vertical migration of water from near outcrops of Tertiary marine sediments underlying the alluvial aquifer in most areas of the basin.” .

29-131

132. In its discussion of these impacts, USG DEIR/EIS 4/06 (at 3.3-78) noted that the complexities of the basin are such that the BE computer model was unable to reproduce changes in water quality that occurred in the vicinity of the wells exporting water to Mexico.

29-132

133. Mitigation Measure 3.3-2 (USG DEIR/EIS 4/06 at 3.3-78 to 79) is next to meaningless because it mentions bottled water as a replacement for domestic water from private wells or hooking up to a replacement supply where there is inadequate or non-existent infrastructure for such hookups. . Absent any mandatory bonding requirements sufficient for large scale infrastructure developments, given USG’s history of two filings for bankruptcy, the assertion that USG would bear full costs is not convincing, especially when any USG responsibility is left to the County Groundwater Management Cttee. The Mitigation Measure provides no clues to the source of water for servicing the new infrastructure. Wouldn’t having USG use Colorado River water through its April 2006 service agreement with IID make more sense and be more economically feasible in the long term? USG DEIR/EIS 4/06 at 3.3-79 notes that there are no mitigation measures that could reduce the impact to less than significant.

29-133

134. Impact 3.3-4 widespread degradation of water quality due to increased USG export to Plaster /City, notes that past water quality degradation related to much smaller export pumping to Mexico occurred over a shorter time than the increase contemplated over a more than 80 year period. (USG DEIR/EIS 4/06 3.3-80.) The potential for vertical migration of saline water from depth is a greater likelihood than lateral migration of saline water from east of Coyote Wells. (USG DEIR/EIS 4/06 3.3-80) Even after mitigation which would be insignificant and incapable of restoring water quality, the

29-134

- impact would remain significant. (USG DEIR/EIS 4/06 3.3-81) **29-134
Con't.**
135. Groundwater Monitoring Program to detect increases in rate of water level declines and as an early warning of water quality degradation from either lateral or vertical migration of saline water from Tertiary marine outcrops or Tertiary sediments underlying the potable aquifer. (USG DEIR/EIS 4/06 at 3.3-81) Why did it take 13 years from the time of Dr. Huntley’s recommendations for increased monitoring for the County to get serious? By USG DEIR/EIS 4/06 Fig. 3.3-17 (at 3.3-83) the document finally has a map depicting locations of wells. Too bad that it also fails to include any legend, scale or indicate North, basic information that should be included on any map. **29-135**
136. After completing review of the alternatives for obtaining process water for the Plaster City factory, we conclude that the only one that makes any long term sense is the Full Use of IID water alternative. **29-136**
137. On USG DEIR/EIS 4/06 Fig 3.3-18 at USG DEIR/EIS 4/06 3.3-95, the public is at last provided with an Assessors’ Parcel Number (APN) for the proposed quarry well location. Why were there no APNs for USG wells in the Ocotillo-Coyote Wells Basin? **29-137**
138. In the USG DEIR/EIS 4/06 hydrology cumulative impacts section 3.3-106, 107, Why is there no discussion of changes in population and the anticipated groundwater use by such a population or at build-out within the Ocotillo/Coyote Wells Basin for the 80 years of the proposed project? **29-138**
139. USG DEIR/EIS 4/06 Land Use Sec. 3.9.2.4 under discussion of the Land Use Element at USG DEIR/EIS 4/06 3.9-7 and 3.9-8 there is no mention of the ONCAP or the special text of that document to the future water use by US Gypsum at Plaster City. Relevant portions of ONCAP have been cited verbatim herein and provided as an exhibit during the Scoping process. By failing to acknowledge the relevant content of USG DEIR/EIS 4/06 at 3.9-8 grossly misrepresents the concerns of ONCAP which is the Land Use Element’s Community Area Plan for the Ocotillo/Nomirage Community Area in which the wells for the Plaster City factory are located. USG DEIR/EIS 4/06 at 3.9-8 grossly misrepresents the concerns of ONCAP when the USG DEIR/EIS 4/06 asserts that the Proposed Action is consistent with these [General Plan, ONCAP] designations” and the uses or restrictions spelled out in the ONCAP text. **29-139**
140. USG DEIR/EIS 4/06 Section 9 Land Use and Planning must have been written by persons grossly unfamiliar with the various mandatory elements and Community Area Plans which are part of Imperial County’s 1993 General Plan. Furthermore, after just completing review of the devastating conclusions of adverse impacts of the Proposed Project’s contemplated groundwater export to be found in the USG DEIR/EIS 4/06 Section 3.3 Hydrology and Water Quality, it is painfully obvious that the person who wrote the following had either not read the hydrology section or not understood the conclusions presented for Impact 3.3-2 which states that the impact is significant and **29-140**

unavoidable and that “the impact is also unmitigable.” (USG DEIR/EIS 4/06 at 3.3-77.) Similarly for hydrology impact 3.3.3, the impact is significant (USG DEIR/EIS 4/06 at 3.3-78) and following the mitigation measure discussion the USG DEIR/EIS 4/06 at 3.3-79 concludes that: “The long-term affect [sic] to the Basin-wide groundwater resource, however, is still potentially significant and there are no feasible mitigation measures that would reduce the impact to less than significant.” (USG DEIR/EIS 4/06 at 3.3-79.) Hydrology Impact 3.3-4 was determined to be a significant impact with no mitigation measure available (USG DEIR/EIS 4/06 3.3-80) so level of “significance after mitigation” remains significant. (USG DEIR/EIS 4/06 at 3.3-81.)

**29-140
Con't.**

141. Given the cited references to hydrology impacts, we wonder how or why the USG DEIR/EIS 4/06 at 3.9-0 could state “As discussed in Section 3.3, the Proposed Action would not have a significant adverse effect on water resources after mitigation. As such, the Proposed Action is consistent with the goals and policies of the water element.” (USG DEIR/EIS 4/06 3.9-9’) As explained above, this text under the Land Use Section is inconsistent with the conclusions of the hydrology section of the same USG DEIR/EIS 4/06. And, it took almost six years to produce this after the decision of the Appellate Court!!! How sad!

29-141

CONCLUSION:

For the portions of the USG DEIR/EIS of 4/06 and Technical Appendices reviewed, we conclude that the USG DEIR/EIS of 4/06 is more than woefully inadequate, that it contains much information, but that much of the information is more significant for the data not analyzed or omitted from discussion, contains many maps missing legends and with print so small that not even a magnifying glass helps, tables with shocking information are not discussed in a manner adequate to facilitate public understanding and/or confidence, and that preparers of the document appeared unfamiliar with both the region and with the Imperial County’s relevant Planning documents such as the ONCAP. In short, the inadequacies are such that a revised Draft EIS/EIR must be prepared prior to project consideration by decision-makers. The Revised document must include a copy of the Service Agreement between IID and USG and analyze the full use of Colorado River water as the only viable long term source of water for the USG Plaster City factory. We trust that it will not take another 5 years for the revision. In the meantime, based on conclusions of the DEIR hydrology section, USG groundwater pumpage should return to baseline below 400 AF/Y.

Letter 29
Sierra Club, San Diego Chapter, July 17, 2006

Comment 29-1:

Response: Comment noted.

Comment 29-2:

Response: No response is required because the comment is not considered substantive and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

Comment 29-3:

Response: No response is required because the comment is not considered substantive and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

Comment 29-4:

Response: No response is required because the comment is not considered substantive and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

Comment 29-5:

Response: No response is required because the comment is not considered substantive and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

Comment 29-6:

Response: No response is required because the comment is not considered substantive and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

Comment 29-7:

Response: No response is required because the comment is not considered substantive and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

Comment 29-8:

Response: Under the proposed action, U.S. Gypsum would utilize more water from the Basin than it has in recent years, but its use will remain below the highest historical use approved by the County. See, Planning & Development Services letter dated March 8, 2006 to Matt Huss of U.S. Gypsum. For discussion of groundwater levels, see General Response 4.3.6. See General Response 4.3.7 for discussion of the water balance.

As stated in the Draft EIR/EIS, the value of 767 AF/Yr is the maximum amount of proposed groundwater pumping. While the accuracy and documentation of this historical pumping value (based on a reported usage in 1972) may be the subject of inquiry, it is presented as the maximum proposed pumping for evaluation of potential impacts on groundwater. The Draft EIR/EIS finds for Impacts 3.3-1 and 3.3-3 that impacts on neighboring wells of this proposed pumping are significant but can be mitigated to less than significant. The Draft EIR/EIS finds for Impacts 3.3-2 and 3.3-4 that impacts on the groundwater Basin of this proposed pumping are significant and cannot be mitigated.

The proposed pumping of 767 AF/Yr is compared in the Draft EIR/EIS to a baseline water usage of 347 AF/Yr, which represents the average water usage for 1994 through 1998. The 767 AF/Yr estimate is used in the 2004 numerical model as part of the historical pumping record for the period 1970 to 1975. However, inclusion of this estimate has minimal significance to the model, which focuses more on recent conditions (when USG pumping was measured) and projection into the future. See General Response 4.3.8 for evaluation of the numerical model as a reasonable tool for evaluating impacts. Also see the *Ocotillo/Coyote Wells Hydrology and Groundwater Modeling Study* prepared by Bookman-Edmonston dated January 16, 2004 ("Modeling Study"), which is included in Volume II of the Draft EIR/EIS as Appendix B-2.

Finally, with regard to unreasonable use or waste of water, all of the water would be put to beneficial use in the production of a needed commodity. As discussed in the Response to Comment 25-8, many improvements have been made at the Plant to reduce water consumption.

See also General Response 4.3.5.

Comment 29-9:

Response: Refer to General Response 4.3.6 for discussion of recharge and groundwater levels, and Responses to Comments 26-31 and 27-24.

The lack of water level response to precipitation may reflect a significant lag time between rainfall events and recharge to the water table resulting from the

distance from the washes to the monitored wells and in some areas, the significant thickness of the unsaturated (vadose) zone. The comment also characterizes groundwater level declines across the Basin, including areas with different geologic formations and different trends. See Response to Comment 27-24.

Comment 29-10:

Response: The Draft EIR/EIS does not state or suggest that "the industrial uses at Plaster City and the most economical source for obtaining water for industrial purposes is a need which should trump overlying domestic needs."

See also General Response 4.3.5.

Comment 29-11:

Response: The decision of the California Court of Appeal and the judgment of the Imperial County Superior Court, each of which concerned the Negative Declaration adopted for the Project by the County in 1998, speak for themselves. No further response is required because the comment contains only legal contentions and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

Comment 29-12:

Response: Comment noted. The Basin has served the Plant and Quarry operations, including manufacturing, the company village, the former swimming pool, irrigation and dust suppression, in some cases since the 1920s. See also General Response 4.3.11 (Consistency with ONCAP).

See also General Response 4.3.11.

Comment 29-13:

Response: See General Response 4.3.11.

Comment 29-14:

Response: During the period 1980 to 1990, the combined population of the communities within the study area (Painted Gorge, Ocotillo, West Texas, Nomirage, and Yuha Estates) increased by approximately 1.4 percent annually. During the period 1990 to 2000, the combined population of these communities declined by 1.1 percent. Nonetheless, the Modeling Study conservatively assumed a 1.4 percent constant annual population increase through the year 2025. See Modeling Study, pp. 4-4 and 4-5 and General Response 4.3.8.

See also General Response 4.3.11.

Comment 29-15:

Response: Comment noted. The limitations of the 1996 Bookman-Edmonston study and other previous studies were acknowledged and addressed in the Draft EIR/EIS. See Draft EIR/EIS, pp. 3.3-34 and 3.3-41. See also the discussions in General Responses 4.3.6, 4.3.7, and 4.3.8. See also Response to Comment 27-1.

Comment 29-16:

Response: No response is required because the comment contains only legal contentions and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

See also Response to Comment 29-15.

Comment 29-17:

Response: The amount of time needed to prepare the Draft EIR/EIS reflects the complexity of the issues and the thoroughness with which the issues were addressed.

The balance of the comment does not require a response because it contains only legal contentions and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

See also General Response 4.3.11.

Comment 29-18:

Response: See Response to Comment 3-1. Scoping materials presented in Appendix B of Volume II provide a transcript of the event, list of responders including letters originated by the Sierra Club on January 30, 2002 and February 20, 2002, providing submissions by the Sierra Club dated November 23, December 4, December 7, and December 9, 1998; January 13, 1999; and 1999 attached exhibits. Appendix B also includes transcription of the scoping hearing including issues presented by the Sierra Club. Issues of concern identified in the scoping process are further summarized in Volume I, Section 5.1.1 Issues of concern, page 5.0-2.

Comment 29-19:

Response: The following maps and figures located within the Draft EIR/EIS depict information specific to the list presented in Comment 29-19. The information

requested is available on figures throughout the document and in application submittals and supporting documentation incorporated by reference. The reader should reference the June 2003 Mine Reclamation Plan. Specific information can be located as follows.

Assessors Parcel Numbers (APN), Township and Range (T&R), Sections, well sites, appears on the following Draft EIR/EIS Figures: 1.0-1, 2.0-1, 2.0-3, 2.0-5, 2.0-10, 2.0-19, 3.3-1, 3.3-4, 3.3-17, 3.3-18, and 3.5-2.

Plant Parcels and detail are presented in Figures 2.0-3, 2.0-4, 2.0-5, 2.0-7, 2.0-9, and 3.6-4.

Quarry Parcels and detail are presented in Figures 2.0-1, 2.0-6, 2.0-8, 2.0-13, 2.0-15 and the Mine Reclamation Plan, June 2003.

	Plant	Quarry
Ocotillo	8 miles	18 miles
Seely	16 miles	27 miles
El Centro	18 miles	36 miles
Westside Canal	5 miles	22 miles

Centinela State Prison is not identified on a figure. It is located at 2302 Brown Road in Imperial, California 92251 approximately 4.8 miles from the Plant and 21 miles from the Quarry.

The Elsinore fault is identified in the following Figures: 3.2-1, 3.3-1, 3.3-3, and 3.3-4.

Imperial Irrigation Districts (IID) Westside Main Canal is identified in Figures: 2.0-19 and 2.0-20.

The BLM Fish Creek wilderness boundary is identified in Figure 2.0-1, Figure 2, Appendix C-3 Volume II of the Draft EIR/EIS.

Flat-tailed Horned Lizard Management Area is identified in Figures 3.5-2, 3.5-3, and Map 4, Appendix C Volume II of the Draft EIR/EIS.

West Mesa Area of Critical Environmental Concern (ACEC), is located on Map 3, Land Uses, Appendix C, Volume II of the Draft EIR/EIS.

Yuha Desert ACEC is located on Map 3, Land Uses, Appendix C. Volume II of the Draft EIR/EIS.

San Sebastian Marsh/San Felipe Creek ACEC is located on Figures 3.5-4 and 3.5-5.

Peninsular bighorn sheep critical habitat is identified on Figure 3.5-2. The reader should also General Response 4.3.1. The boundary for Peninsular bighorn sheep has been revised since publication of the Draft EIR/EIS.

U.S. Naval live bombing target 103 is identified on Figure 3.5-1.

BLM open area around Plant, north of Highway 80 is identified on Figure 2.0-4.

Comment 29-20:

Response: There are over 75 figures presented in the Draft EIR/EIS and 50 Tables depicting and explaining information relevant to the proposed project in addition to detailed plot plans in the Reclamation Plan and supplemental technical reports in the appendices. Several map sources have been used, many include publication dates.

Several of the figures in Section 2 do contain dates. Dates appear on figures where relevant. A reasonable effort has been made to illustrate as much of the Proposed Action characteristics as possible. All of the information presented in the Draft EIR/EIS could not be incorporated into one map.

Comment 29-21:

Response: Comment noted. See also Response to Comment 29-19.

Comment 29-22:

Response: The parcel numbers for the Ocotillo wells are 033-380-044, 033-380-047, 033-390-025, and 033-572-003.

The parcel numbers for the Plant are 034-360-6901, 034-360-9101, and 034-360-4801.

The parcel numbers for the Quarry are 033-020-09, 033-060-08, 033-060-09, 033-070-01, 033-070-04, 033-070-05, 033-070-08, 033-070-10, 033-070-11, 033-07-07, 033-070-17, 033-070-23, 033-080-05, 033-090-12, 033-090-13, 033-090-14, 033-090-15.

Comment 29-23:

Response: See Responses to Comment 29-8 and 15-4. See also CEQA Guidelines, § 15204 ("When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.").

Comment 29-24:

Response: No response is required. See CEQA Guidelines, § 15204 ("When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.").

Comment 29-25:

Response: The three USG wells in Ocotillo currently have chart style flow meters that measure the water output. These USG wells have been metered since 1981. USG intends to replace the current meters with new turbine style flow meters. See Response to Comment 29-27.

No simple relationship exists between total USG water use and factory output. Variables over time have included use by residents of the former Plaster City village, past discharges of wastewater, and irrigation of landscaped wind blocks, and increasing efficiency of water use in the production process. See Response to Comment 25-8 for discussion of water conservation.

Comment 29-26:

Response: See Responses to Comments 15-4, 29-8, and 29-27.

Comment 29-27:

Response: As explained in the Draft EIR/EIS, between the time of the Superior Court's decision in 1999 to uphold the County's 1998 negative declaration for the Project and the Court of Appeal's decision in 2000, the Plant expansion/modernization had been substantially completed. Consequently, by 2006, groundwater usage had increased to about 550 acre-feet per year. However, because the environmental review process began in 1998, the lead agencies determined that the baseline for evaluating the potential environmental effects of the Project would be the physical conditions that existed in 1998. See Draft EIR/EIS, pp. 1.0-8 through 1.0-11 and 2.0-7 through 2.0-18.

As indicated in Table 3.3-4 of the Draft EIR/EIS, the average water usage at the Plant from 1981 through 1998 was approximately 420 AF/Yr. Nonetheless, in order to present a conservative analysis of the potential impacts on groundwater resources, the Draft EIR/EIS assumes a baseline water usage of 347 AF/Yr, which represents the average water production for the period from 1994 through 1998.

The paragraph beginning at the bottom of page 2.0-17 of the Draft EIR/EIS has been replaced with the following text:

“Water for the Plant including production water, potable water and water for sanitary uses has been supplied by three wells located near Ocotillo, California approximately 8.5 miles west of the Plant site. An 8-inch diameter gravity-feed pipeline transports the water to the Plant. In 1998, water usage at the Plant was approximately 333 acre-feet per year (AF/Yr). Historically, water usage had been higher; however, USG was able to reduce its water use by implementing water conservation measures to ensure that (1) there is no process water discharge from the operation, and (2) water is no longer discharged for cooling production equipment. These conservation measures, instituted in the 1980s and 1990s, have reduced water usage from the recorded high of 767 AF/Yr to the 1998 value. From 1981 through 1998, the average water usage at the Plant was approximately 420 AF/Yr.”

Comment 29-28:

Response: See Response to Comment 29-8.

Comment 29-29:

Response: Comment noted. See Response to Comment 29-8.

Comment 29-30:

Response: See Response to Comment 29-8.

Comment 29-31:

Response: See Response to Comment 29-8.

Comment 29-32:

Response: See Responses to Comments 29-8 and 29-27. See also General Response 4.3.5. Prior to adoption of the Groundwater Management Ordinance, Imperial County does not require reporting of 25 feet/year.

Comment 29-33:

Response: See Response to Comment 29-8.

Comment 29-34:

Response: See Response to Comment 29-8. See also General Response 4.3.5.

Comment 29-35:

Response: See Response to Comment 29-8.

Comment 29-36:

Response: See Responses to Comments 29-8 and 29-27. See also General Response 4.3.5.

Comment 29-37:

Response: See Responses to Comments 29-8 and 29-27. See also General Response 4.3.5.

Comment 29-38:

Response: See Responses to Comments 29-8 and 29-27. See also General Response 4.3.5.

Comment 29-39:

Response: Comment noted.

Comment 29-40:

Response: See Response to Comment 29-8.

Comment 29-41:

Response: Comment noted. The existing well at the Quarry is described on page 2.0-45 in the Draft EIR/EIS. The water at this well is highly mineralized.

Comment 29-42:

Response: The EIR is an informational document that will inform public agency decisionmakers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. CEQA Guidelines, § 15121(a). An EIR is required to include a statement of objectives sought by the proposed project, which should include the underlying purpose of the project. The statement of objectives helps the lead agency develop a reasonable range of alternatives to evaluate in the EIR and aids the decision makers in preparing findings or a statement of overriding considerations, if necessary. *See* CEQA Guidelines, § 15124(b).

Comment 29-43:

Response: See General Response 4.3.4.

Comment 29-44:

Response: As stated in Section 2.5.2.1 of the Draft EIR/EIS, a new 10-inch water line would provide a more reliable water supply, minimizing line surges and associated leaks/ruptures, providing a quicker water system recovery and improving fire protection at the Plant.

See also General Response 4.3.4.

Comment 29-45:

Response: See General Responses 4.3.4 and 4.3.11.

Comment 29-46:

Response: See General Response 4.3.4.

Comment 29-47:

Response: See Response to Comment 29-14 regarding projection of population growth. USG use of groundwater from the Ocotillo-Coyote Wells Groundwater Basin is not an off-basin use as defined in the County's Groundwater Management Ordinance because the Plant overlies the groundwater Basin from which the groundwater is extracted. See Section 92201.04 of the County Code.

See also General Responses 4.3.5 and 4.3.11.

Comment 29-48:

Response: Comment noted. See General Response 4.3.11.

Comment 29-49:

Response: Neither the County nor the Draft EIR/EIS have "ignored" the provisions of ONCAP. See General Response 4.3.11.

Comment 29-50:

Response: Comment noted. See General Response 4.3.11.

Comment 29-51:

Response: Comment noted. See General Response 4.3.11.

Comment 29-52:

Response: Comment noted. See General Response 4.3.11.

Comment 29-53:

Response: Comment noted. See General Response 4.3.11.

Comment 29-54:

Response: Comment noted. A site specific geohydrologic study has been conducted. See Sections 3.2 Geology and 3.3 Hydrology and Water Quality, Volume I of the Draft EIR/EIS.

Comment 29-55:

Response: See Response to Comment 29-54 above.

Comment 29-56:

Response: See Response to Comment 29-8. See also General Response 4.3.5.

Comment 29-57:

Response: Comment noted. See also General Response 4.3.11.

Comment 29-58:

Response: Comment noted. See also General Response 4.3.11.

Comment 29-59:

Response: Comment noted. See also General Response 4.3.11.

Comment 29-60:

Response: Comment noted. See also General Responses 4.3.11 and 4.3.4.

Comment 29-61:

Response: Comment noted.

Comment 29-62:

Response: Recharge to the groundwater Basin occurs along these washes during periods of high precipitation and therefore they are important to show their location on maps.

Comment 29-63:

Response: See Response to Comment 29-62.

Comment 29-64:

Response: The local groundwater Basin has been defined and designated differently by different agencies and researchers for different purposes. The map on Figure 3.3-1 is the sole source aquifer defined by EPA (see Draft EIR/EIS explanation in Section 3.3.2). The description in Section 3.3.2.1 of the Ocotillo-Coyote Wells Groundwater Basin (as it is commonly known) corresponds to the current definition of the Coyote Wells Valley Groundwater Basin by the California Department of Water Resources in Bulletin 118.

Comment 29-65:

Response: There are no USGS rainfall monitoring stations within the Basin.

Comment 29-66:

Response: Because of the thickness of the aquifer's unsaturated zone and the location of the wells far from the recharge areas near the mountain fronts, recharge takes decades to reach the groundwater near Ocotillo. Correlations between recharge events, groundwater levels, and TDS values are not apparent.

Comment 29-67:

Response: Comment noted with agreement. Insignificant recharge of precipitation occurs on the valley floor. See General Response 4.3.7 for discussion of the water balance and its representation in the numerical groundwater model used to assess impacts. The model assumes that recharge is limited to a small portion of the Basin, namely the washes.

Comment 29-68:

Response: These figures were provided by the USGS to show an overview of the distribution of current and historic wells that were measured for water level or sampled for water quality. These wells are listed in Appendix B1 after the figures. More accurate and clearer maps showing these wells can be found in the Modeling Study (Plate 1) and in the Draft EIR/EIS (Figure 3.3-4).

Comment 29-69:

Response: See Response to Comment 29-68.

Comment 29-70:

Response: See Response to Comment 29-68.

Comment 29-71:

Response: The USGS has listed this as an alternative well.

Comment 29-72:

Response: See Responses to Comments 29-65 and 29-67. See General Response 4.3.6 for current data, including data from the USGS National Water Information System. Rainfall on the valley (basin) floor is not believed to contribute to the significant recharge of the aquifer.

Comment 29-73:

Response: The Modeling Study (Bookman-Edmonston 2004) does not contain a page 1-10. However the aquifer pumping tests (including all results) are presented in Appendix A of the Modeling Study.

Comment 29-74:

Response: The referenced statement means that the information presented on groundwater levels and quality and the interpretation of that data from Bookman-Edmonston 2006 has been reviewed and is correct. Bookman-Edmonston 2004 has been reviewed and is correct. Some interpretations of the Bookman-Edmonston 2004 study revised the interpretation of the Bookman-Edmonston 2006 study. See General Response 4.3.6 for a discussion of the previous and current hydrogeologic conceptual models of the Basin.

Comment 29-75:

Response: Comment noted.

Comment 29-76:

Response: Comment noted. However, because this well is located in the Ocotillo area it does provide important information about local aquifer parameters that can be used to estimate the effects of pumping in that area. This area is where the increased pumping by USG would occur.

Comment 29-77:

Response: The affect of USG's pumping is negligible in wells located in Nomirage. See General Response 4.3.6 for discussion of the distinct hydrogeology of the different areas of the Basin (e.g., Ocotillo and Yuha Estates), and the different responses to pumping. See General Response 4.3.7 for discussion of water balance issues, including effects of the proposed pumping on the Basin.

Comment 29-78:

Response: Comment noted. However, there has been no new data presented by Dr. Huntley after 1993.

Comment 29-79:

Response: See General Response 4.3.6 for discussion of groundwater levels. See General Response 4.3.7 for a discussion of overdraft and the water balance.

Comment 29-80-1:

Response: USG has three existing wells near Ocotillo, all of which are metered.

Comment 29-80-2:

Response: Comment noted.

Comment 29-80-3:

Response: The USGS has an active water quality monitoring program, and an additional monitoring program is presented in the Draft EIR/EIS as part of the Proposed Action.

Comment 29-80-4:

Response: The proposed monitoring plan calls for the addition of nested monitoring wells.

Comment 29-80-5:

Response: Comment noted with agreement. A yearly water monitoring schedule is included in the proposed monitoring plan presented in the Draft EIR/EIS.

Comment 29-80-6:

Response: Each of these items is included in the proposed monitoring plan presented in the Draft EIR/EIS.

Comment 29-80-7:

Response: Comment noted.

Comment 29-81:

Response: Comment noted.

Comment 29-82:

Response: See Response to Comment 29-64 for discussion of the different designations of the groundwater Basin by different agencies, including the EPA's Sole Source Aquifer designation and the Department of Water Resources definition of the groundwater basin, which extends further east and encompasses not only Ocotillo, but also Plaster City. See General Response 4.3.6 for discussion of the previous and current understanding of the hydrogeologic setting; the current hydrogeologic understanding is represented in the 2004 Bookman-Edmonston report and in the numerical model.

Comment 29-83:

Response: Comment noted. See General Response 4.3.7 for updated groundwater level data.

Comment 29-84:

Response: See General Response 4.3.6 for discussion of water level and quality data.

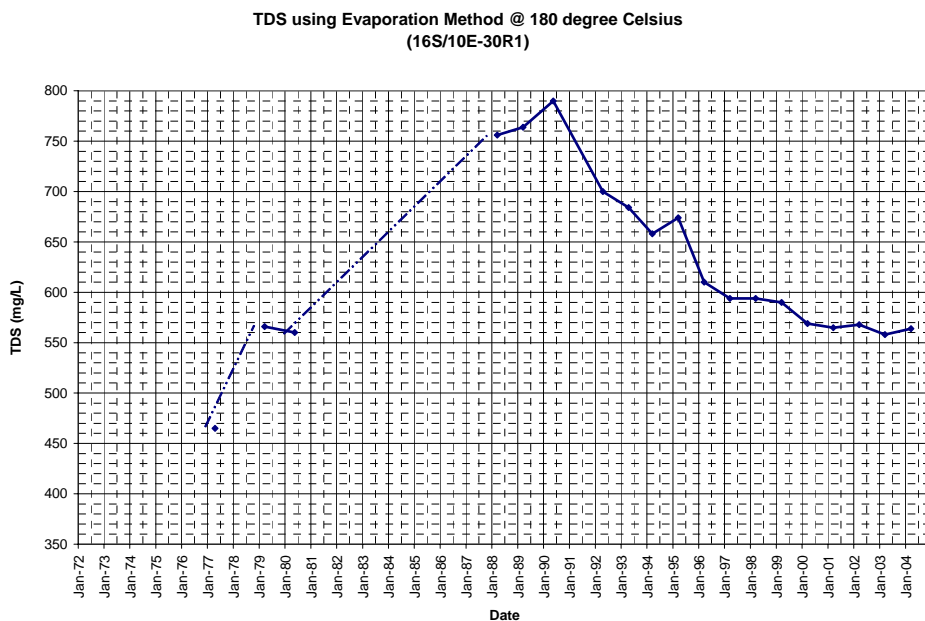
Well 17S/10E has been added next to Well 11B1 in the first column of Table 3.3-3A of the Draft EIR/EIS.

The text on page 3.3-17 in the Draft EIR/EIS states that these are selected wells in the Basin. These selected wells are presented to characterize the groundwater basin, and do not include all of the wells in the USGS data. Not all of the wells in the USGS data are needed to characterize the Basin. Other wells have been added to help characterize the Basin. There are three wells added to Table 3.3-3A that are not included in the USGS data to provide additional information about the Basin to the lead agencies. These wells are 16S/9E-36D2, 16S/9E-29L1 and 176S/10E-11G2. Well 16S/9E-26F1 is an Alternate Well with no data. Well 16S/9E-36B1 has only four data entries which occur between 5/6/1997 and 3/22/2001 and show basically consistent TDS values between 309 and 349 mg/L. Likewise, Well 16S/9E-42A8 has eight data points between 3/24/1994 and 3/27/2001 and show TDS values between 886 and 954 mg/L. Well 16S/9E-36C2 has the most data, with three incomplete analyses in the 1960s, and 10 complete results from 4/2/1991 to 3/26/2001. However, Well 16S/9E-36C2 shows TDS values that ranges

between 346 and 368 mg/L and offers no new information about the Basin. Well 16S/10E-30R1 is not covered in the Draft EIR/EIS, but is included by reference in Bookman-Edmonston 1996. A revised Table 3.3-3A has been included in Appendix A of the Final EIR/EIS.

Comment 29-85:

Response: TDS levels in Well 16S/10E-30R1 are shown on Figure 5-13 of the Bookman-Edmonston 1996 report. Figure 5-13 is reproduced and updated below. This well shows an increase in TDS levels from the 1970s to the 1990s and then a decrease to 1979 levels in about 2000. Despite increased pumping by USG, TDS levels in Well 30R1 have remained consistent.



The groundwater monitoring plan proposed adding monitoring wells including a monitoring well near 30R1.

See Response to Comment 29-84. See also General Response 4.3.6.

Comment 29-86:

Response: Comment noted.

Comment 29-87:

Response: Comment noted.
 Active USG Wells: USG No. 6 - 16S09E36B001
 USG No. 5 - 16S09E36H001
 USG No. 4 - 16S09E36G003

USG wells No. 1, No. 2, No. 3 and original No. 6 were abandoned due to age related production problems and not to any changes in groundwater elevation or quality.

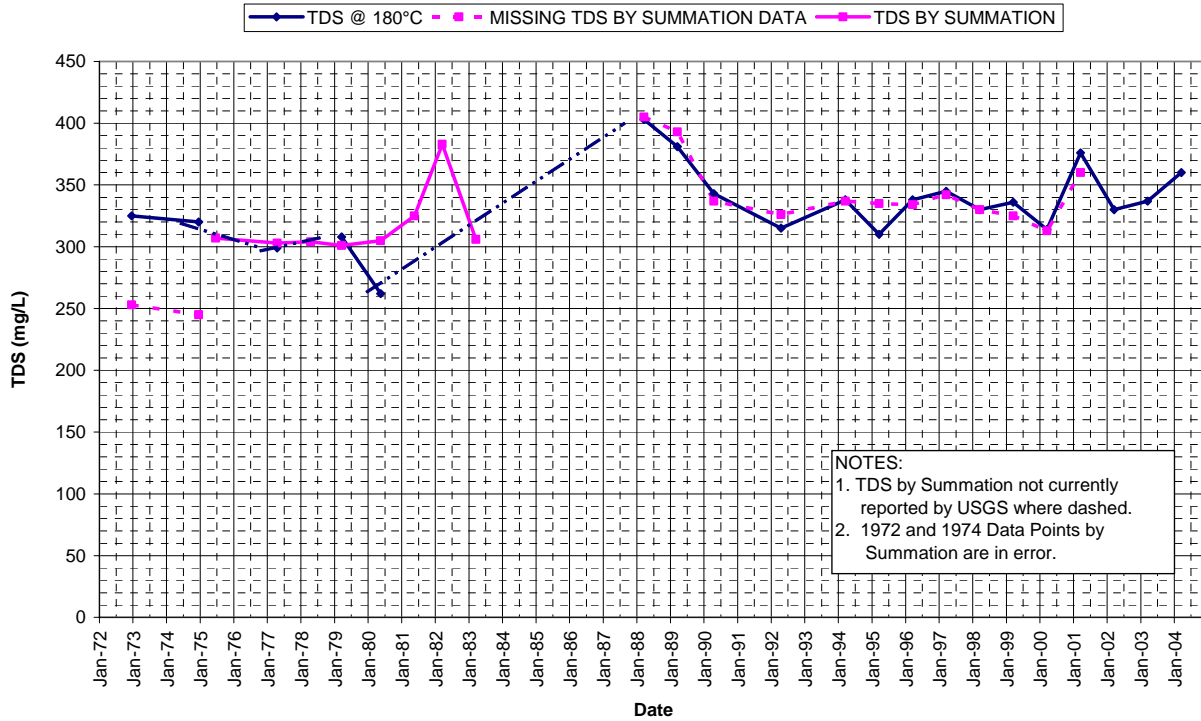
Comment 29-88:

Response: This comment and several subsequent comments focus on Well 25K2 as potentially showing water quality impacts of USG pumping. See General Responses 4.3.6 and 4.3.8 for discussion of this well. Data from this well likely reflect pumping of the well itself and do not reflect regional trends in water levels or quality. When drawing correlations and conclusions, as the comment attempts, it is necessary to review all of the data. Data from Well 25K2 have been reviewed (see General Response 4.3.6) in the context of all available data, leading to the finding that Well 25K2 data are variable, not representative of the Basin, and not reflective of USG pumping.

For discussion of Well 30R1, see Response to Comment 29-85.

As clarification, review of USGS data (included in the Draft EIR/EIS appendix) shows that two samples from this well were taken in 1972 and 1974, which reported TDS of 253 and 245 mg/L, respectively. These are under a column heading labeled “Solids, Sum of Constituents, Dissolved”. At the same time, this data showed that TDS measured by evaporation were 325 and 320 mg/L, respectively. A further review of the USGS data showed that the values of 253 and 245 mg/L were obtained by measuring the individual constituents and summing the results. Normally the TDS determined by these two methods are relatively close. The difference between the two sets of data, however, is largely because silica was not measured and reported in the first data set. Subsequent data in the USGS data show close agreement between the two methods when silica measurements were included. The Figure below shows the historical TDS of Well 25K2 shown in the USGS database when accurately reported by summation and evaporation techniques.

Figure 1
TDS in Well 16S/9E-25K2



Comment 29-89:

Response: See Responses to Comments 29-85 and 29-88.

Comment 29-90:

Response: See Responses to Comments 29-12 and 29-88. Also, pumping of Well 25K2 (albeit less than combined USG pumping at three wells) would have more impact on water quality at Well 25K2 than USG pumping, which is more distant and is distributed among three wells.

Comment 29-91:

Response: See Responses to Comment 29-88.

Comment 29-92:

Response: See Responses to Comments 29-12 and 29-88.

Comment 29-93:

Response: See Responses to Comments 29-85 and 29-88.

Comment 29-94:

Response: See Responses to Comments 29-85 and 29-88.

Comment 29-95:

Response: See Responses to Comments 29-85 and 29-88.

Comment 29-96:

Response: See General Response 4.3.6 for discussion of potential impacts on groundwater. It is noted in the text that Well 25K2 is a pumping well and its water quality is not necessarily indicative of regional trends.

Comment 29-97:

Response: Figure 3-4 in Bookman-Edmonston 2004 shows the location of Yuha Estates relative to the anticline and the topographic contours plotted from USGS DEM (Digital Elevation Model) data. Figure 3-1D also shows the ground surface along the cross section line on Figure 3-1A. See also General Response 4.3.6 discussion of the anticline.

Comment 29-98:

Response: Figure 3-1D of Bookman-Edmonston 2004 shows the location of the wells in the Yuha Estates area and the subsurface geology below the area. See Response to Comment 29-97.

Comment 29-99:

Response: See Responses to Comments 29-97 and 29-98.

Comment 29-100:

Response: Review of USGS topographic maps, DEM data (Figure 3-3 Bookman-Edmonston 2004), and drainage patterns indicated that the general topography of the area is a topographic high. The topographic high is dissected and local depressions in the Yuha Estates area may be flooded at times.

Comment 29-101:

Response: See General Response 4.3.6 for discussion of the hydrogeologic setting of the Yuha Estates area and how it differs from the area around Ocotillo. The unique geology of the wells in the Yuha Estates area explains their large initial drawdowns (i.e. Well 11G1 from about 1978 to 1982), their initial rapid

recovery (approximately 1982 to 1985), and their subsequent slower recovery (post 1985).

Comment 29-102:

Response: The fact that much of the Basin is public lands and not private will limit the growth of the population and help preserve the groundwater for the current uses. Additionally, the Mitigation Measures 3.3-1 and 3.3-2 will ensure that current wells are protected.

Comment 29-103:

Response: The groundwater located under now public lands is part of a connected groundwater aquifer that is accessible and available to local land owners.

Comment 29-104:

Response: The groundwater model (Bookman-Edmonston 2004) used a 1.4 percent population growth for the 80 years of the Project. This estimate could be high given that U.S. Census data from 1990 to 2000 showed a decrease in population of 1.1 percent.

A complete update to Bookman-Edmonston 1996 was not the goal of the Bookman-Edmonston 2004 report. Bookman-Edmonston 2004 was an update to the Bookman-Edmonston 1996 report that contained an Appendix of data used in that report. Modifications and additions to the Bookman-Edmonston 1996 report are presented in the Bookman-Edmonston 2004 update. See General Response 4.3.6 for a discussion of the previous and current understanding of the local hydrogeologic setting.

Comment- 29-105:

Response: Comment noted. Flow meters have been installed at each of the USG wells.

Comment 29-106:

Response: See General Response 4.3.11.

Comment 29-107:

Response: This is not significant. Absent active recharge site such as a river, lake or stream all pumping wells fail to reach equilibrium with recharge, but the decline decreases with time to a point that the decline is basically zero. This is the case with this test.

Comment 29-108:

Response: Plate 1 in Bookman-Edmonston 2004 was included in a separate pocket in the back to be removed when needed to make it more useful. A reader can remove it and have it handy rather than having to flip through pages. Bookman-Edmonston 2004 (including Plate 1) was included as an appendix to the Draft EIR/EIS. Plate 1 and other figures contained in the Draft EIR/EIS clearly show the relative location of wells in the Basin.

Comment 29-109:

Response: Comment noted.

Comment 29-110:

Response: This is an incorrect Figure. A correct Figure is provided in the Final EIR/EIS. Figure 3.3-7 is incorrectly labeled; it reflects groundwater elevations. A revised figure appears in Appendix A of the Final EIR/EIS. Also see Response to Comment 27-4. See General Response 4.3.6 for discussion of the previous and current hydrogeologic conceptual model of the groundwater Basin.

Comment 29-111:

Response: Groundwater is used outside of the groundwater Basin, as defined by the Department of Water Resources Bulletin 118 would include water exported historically to Mexico. See Response to Comment 29-64 regarding Basin definitions and designations.

Comment 29-112:

Response: A use of 1.5 AF/Yr does not take into account the return flow from septic tanks or conservation measures. The groundwater use estimated by Bookman-Edmonston 2004 is correct.

Comment 29-113

Response: Comment noted. Flow meters have been installed at each of the USG wells. However, individual well production data is not available, prior to 1981. See Table 3.3-4 in Appendix A of the Final EIR/EIS.

Comment 29-114:

Response: See Response to Comment 29-113.

Comment 29-115:

Response: Comment noted.

Comment 29-116:

Response: Comment noted.

Comment 29-117:

Response: Comment noted. See Response to Comment 29-8.

Comment 29-118:

Response: The cone of depression related to pumping of the USG wells is not large enough to be observed on wells in the Nomirage area. As seen from the pumping test on USG #6 in Appendix A Bookman-Edmonston 2004, old USG #6 is only 38 feet from USG #6 yet the drawdown from the pumping USG #6 was only about 5 feet.

Comment 29-119:

Response: Comment noted. Data is provided on wells 24D1 and 24B1 in Table 3.3.6C on page 3.3-39. These wells are also included in Figure 3.3-11 and discussed in the Section called Area East of Coyote Wells on page 3.3-60.

Comment 29-120:

Response: Comment noted. The Draft EIR/EIS is providing an estimate of the groundwater flow rate to demonstrate that these flow rates are slow and on the order of from 10 to 20 ft/year.

Comment 29-121:

Response: Comment noted. This statement does contain errors. The blue lines on these maps show ephemeral "seasonal streams" that flow in drainages due to direct precipitation. Recharge mostly occurs in these streams near the base of the mountains.

Comment 29-122:

Response: Comment noted. The slow groundwater recovery is related to less permeable aquifer material underlying more permeable alluvium. See Response to Comment 29-101. See General Response 4.3.6 for discussion of the differing hydrogeologic properties and responses of Layer 1 (alluvium) and Layer 2 (Palm Springs and Imperial formations).

Comment 29-123:

Response: Comment noted. Wells 24B1 and 24D1 were included in the section “Area East of Coyote Wells”, because this section discusses wells located near the transitional zone between the alluvium and the Tertiary sediments.

Comment 29- 124:

Response: Comment noted. However, there is water quality data available on other wells in the area. These wells were used in the analysis and discussed on pages 3.3-54 to 3.3-59 of the Draft EIR/EIS. USG pumping cone of depression has minimal effect on groundwater level in Nomirage.

Comment 29- 125:

Response: Comment noted. See Response to Comment 29-85.

Comment 29-126:

Response: Figure 3.3-16 is intended to show individual well screen intervals in relation to current and predicted groundwater levels. No relationships between individual wells were intended.

Comment 29-127:

Response: All mitigation measures will be fully enforceable through permit conditions, agreements, or other legally-binding instruments. See also Response to Comment 30-14.

Comment 29-128:

Response: As noted in the comment, the Draft EIR/EIS concludes that potential impacts on the groundwater Basin (Impact 3.3-2) are significant and are not reduced to less than significant with the mitigation measures. However, the potential impacts on individual well owners (Impact 3.3-1) are mitigated to less than significant. As discussed in 4.3.8, the numerical model was developed to evaluate potential impacts of USG pumping on individual wells and the Basin. While acknowledging Basin complexities, the numerical model is a reasonable tool for evaluating impacts, particularly in the vicinity of the USG wells. As indicated by the model and discussed in Section 3.3.3.7 of the Draft EIR/EIS, water levels in the Basin are expected to decline by up to 10 feet under baseline conditions (i.e., without the project) over the next 80 years, and if USG were to increase pumping to 767 acre-feet per year, then the decline is expected to increase by an additional 20 to 23 feet.

Comment 29-129:

Response: See Response to Comment 20-23. No vegetation or wildlife habitat has been identified that would be affected by the additional groundwater level decline from the Project. See page 3.3-75 of the Draft EIR/EIS.

Comment 29-130:

Response: See Response to Comment 29-128.

Comment 29-131:

Response: Impact 3.3-3 is mitigated to a less than significant impact with the implementation of Mitigation Measure 3.3-2.

Comment 29-132:

Response: See General Response 4.3.6 for discussion of Well 25K2. See General Response 4.3.8 for discussion of Well 25K2 and the numerical model as a reasonable tool for evaluating potential impacts. See also Response to Comment 29-88.

Comment 29-133:

Response: Comments noted. See Response to Comment 29-127.

Comment 29-134:

Response: See Responses to Comments 9-2 and 29-88 and General Response 4.3.6.

Comment 29-135:

Response: Comments noted. Figure 3.3-17 has been revised.

Comment 29-136:

Response: Because of the high and variable salinities of Colorado River water during times of the year, the Full Use of IID water is not a feasible alternative. See General Response 4.3.4.

Comment 29-137:

Response: The parcel numbers for the USG Ocotillo wells are 033-380-044, 033-380-047, 033-390-025, and 033-572-003.

Comment 29-138:

Response: See Response to Comment 29-14.

Comment 29-139:

Response: See General Response 4.3.11.

Comment 29-140:

Response: Comment noted. See General Responses 4.3.6 and 4.3.11. See also Responses to Comments 26-2-1 through 26-3-6.

Comment 29-141:

Response: See General Response 4.3.11. See also Responses to Comments 26-2-1 through 26-3-6.

Letter 30

**Sierra Club, San Diego Chapter • Desert Protective Council
Center for Biological Diversity • California Wilderness Coalition**

VIA ELECTRONIC MAIL AND U.S. MAIL

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PLANNING & DEVELOPMENT SERVICES

IMPERIAL COUNTY

JUL 17 2006

RECEIVED

**RE: U.S. Gypsum Company Expansion/Modernization Project Imperial County,
California; Draft Environmental Impact Report/Environmental Impact Statement; State
Clearinghouse No. 2001121133**

I. INTRODUCTION

These comments are submitted on behalf of the Center for Biological Diversity (“Center”), the San Diego Chapter of the Sierra Club (“Sierra Club”), the Desert Protective Council, and the California Wilderness Coalition (“CWC”) (collectively, conservation organizations”), for the draft EIR/EIS for the U.S. Gypsum Company Expansion/Modernization Project Imperial County, California; State Clearinghouse No. 2001121133 (“the project” or “mine expansion”). As detailed below, the conservation organizations object to approval of the project based on the inadequacy of the current environmental documents in identifying, analyzing, avoiding or minimizing and mitigating the many significant impacts of the project. The unacceptable analyses of the impacts of the proposed project include, but are not limited to: failure to competently review overdraft and potential catastrophic degradation of groundwater resources including the sole source of drinking water for the local communities of Ocotillo, Coyote Wells, Yuha Estates, and Nomirage; impacts to biological resources including many rare, threatened and endangered species protected under both State and Federal law; impacts to air quality and impacts to visual resources.

The Draft EIR/EIS fails to adequately address many of the impacts that could result from the proposed project, including but not limited to: impacts to biological resources, air quality, water supply and water quality, and cumulative impacts. In addition, if undertaken as proposed, the project will violate local and state planning and zoning laws, the Safe Drinking Water Act (“SDWA”), the Clean Water Act (“CWA”), the Endangered Species Act (“ESA”), the Clean Air Act (“CAA”), the Federal Land Policy Management Act (“FLPMA”), the California Desert

Conservation Act (“CDCA”), and both federal and state mining and water laws, regulations and standards.

The Sierra Club is a California non-profit corporation dedicated to the conservation and preservation of the nation's natural resources. The San Diego chapter represents approximately 16,000 members who reside in both San Diego and Imperial Counties, and 750,000 nationwide. The Sierra Club has long been involved in the issues surrounding this mine and land use issues in the basin, and in particular groundwater issues in the area.

The Center has over 25,000 members throughout California and the western United States, including Imperial County. The Center is a non-profit organization dedicated to the preservation, protection, and restoration of biological diversity, native species, ecosystems, and public lands. The Center’s members and staff regularly use lands and waters throughout the US Gypsum Quarry site and its surroundings, including the Project site for observation, research, aesthetic enjoyment, and other recreational, scientific, and educational activities. The Center’s members and staff have researched, studied, observed, and sought protection for the lands within and threatened species that live within and around the US Gypsum Quarry site. The Center’s staff and members derive scientific, recreational, conservation, and aesthetic benefits from these lands and species existence in the wild.

The Desert Protective Council’s (“DPC”) mission is to safeguard those areas of the California Desert of unique scientific, historical, spiritual, cultural and recreational value for this and succeeding generations, and to educate children and adults to better understanding of the desert. The Desert Protective Council has been following the proposed expansion project since 2001. DPC submitted written comments, along with many other groups, in February 2002. DPC is particularly concerned with the protection of the Ocotillo Sole Source desert aquifer, with the protection of the scenic, recreational and wildlife values of adjacent Anza-Borrego Desert State Park, with the protection of Bighorn Sheep Critical habitat and protection of the habitat of the Flat-Tailed Horned Lizard.

The California Wilderness Coalition defends the pristine landscapes that make California unique and provide clean air and water, a home to wildlife, and a place for recreation and spiritual renewal. CWC is the only organization dedicated to protecting and restoring California's wild places and native biodiversity on a statewide level. Since 1976, CWC has empowered local communities and conservationists to be the voice for wild California. CWC is particularly concerned with the potential impacts to wild lands including areas that have already been designated as wilderness and those undeveloped areas bordering wilderness. CWC is also concerned about the impacts to air, water, and wildlife in the region and the impacts to visual resources and biological resources inside wilderness areas.

The interests of staff and members of the conservation groups will be directly impacted by the proposed project. Each of the organizations has been actively involved with the issues surrounding the proposed expansion of the mine and plant and has participated in the process including submitting extensive comments during the scoping phase for the proposed project to both the BLM and the County.

These comments incorporate by reference scoping comments submitted by the conservation organizations to both BLM and Imperial County for this project. Unfortunately, the agencies have failed to properly consider and acknowledge the receipt of the extensive comments provided during the scoping for the draft EIR/EIS by the conservation groups and other members of the public.¹

These comments are being timely submitted by July 17, 2006. Although these comments are being submitted before the close of the current comment period, the conservation groups reserve the right to submit additional comments and raise additional issues going forward. These comments incorporate by reference the supplemental comments submitted on this day under separate cover by the San Diego Chapter of the Sierra Club.

As the agencies are well aware, Sierra Club challenged an earlier environmental review – a negative declaration—that the County prepared for a portion of this project. See Sierra Club v. Imperial County, D0D034281 (Cal. App., 4th District). The Court of Appeals found that the County erred by failing to prepare an environmental impact report (“EIR”) because there was substantial evidence that the project’s proposed increased use of groundwater and increased truck traffic would have significant environmental impacts. The Court of Appeal also agreed with the Sierra Club that USG had failed to verify its claims regarding its historic use of water and that it had failed to accurately describe the proposed project.

II. The EIR/EIS is Inadequate under both CEQA and NEPA.

A. Legal Standards for CEQA and NEPA

California Environmental Quality Act, Public Resources Code §§ 21000-21178 (“CEQA”), and NEPA have many similar requirements. However, in addition, among other requirements, CEQA mandates that many specific kinds of impacts be considered, requires analysis of alternatives that avoid significant impacts to the environment, and requires agencies to minimize or mitigate impacts to the extent feasible. Thus, for the most part, if an EIR/EIS meets the standards of CEQA it will also meet the standards for NEPA. However, a document that meets the NEPA standards may not meet the CEQA standards. In any case, for the purposes of these comments, any discussions regarding violations of CEQA are meant to also convey corresponding violations of NEPA, and vice versa.

NEPA is an action-forcing statute. Its sweeping commitment is to “prevent or eliminate damage to the environment and biosphere by focusing government and public attention on the environmental effects of proposed agency action.” Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 371 (1989). It requires the federal agency to “consider every significant aspect of the environmental impact of a proposed action,” Vermont Yankee Power Corp. v. Natural Resources

¹ What ever the agencies’ motivations for excluding the properly submitted scoping comments from this draft EIR/EIS the agencies cannot ignore them. Those scoping comments and the exhibits thereto (including all of the exhibits to the conservation groups’ comments to both BLM and the County totaling approximately 900 pages) are part of the administrative record for the proposed project and must be reviewed and responded to by the agencies before any decision can be made pursuant to both NEPA and CEQA. All previous comments and exhibits are hereby incorporated and reasserted in these comments.

Defense Council, 435 U.S. 519, 553 (1978), and to ensure “that the agency will inform the public that it has indeed considered environmental concerns in its decision making process.” Baltimore Gas and Electric Company v. NRDC, 462 U.S. 87, 97 (1983).

NEPA requires that federal agencies take a “hard look” at the environmental impacts of a mine proposal. See Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 416 (1971). In doing so, NEPA also prohibits reliance upon conclusions or assumptions that are not supported by scientific or objective data. Citizens Against Toxic Sprays, Inc. v. Bergeland, 428 F.Supp. 908 (1977). To satisfy NEPA, a federal agency “must explicate fully its course of inquiry, its analysis, and its reasoning.” Dubois V. U.S. Department of Agriculture, 102 F.3d 1273, 1287 (1st Cir. 1996).

NEPA’s implementing regulations require agencies to:

[I]nsure the professional integrity, including scientific integrity of the discussions and analysis in environmental impact statements. [Agencies] shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement.

40 CFR 1502.24 (Methodology and Scientific Accuracy).

Further, 40 CFR § 1502.1 mandates that NEPA documents be “supported by evidence that the agency has made the necessary environmental analysis.” Consequently, federal agencies have a duty to disclose the underlying scientific data and rationale supporting the conclusions and assumptions in an EIS.

Federal agencies are required to “describe the environment of the areas to be affected or created by the alternatives under consideration.” 40 CFR § 1502.15. The establishment of the baseline conditions of the affected environment is a practical requirement of the NEPA process. “The concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process.” Council of Environmental Quality, *Considering Cumulative Effects under the National Environmental Policy Act* (May 11, 1999).

In conducting a NEPA review, federal agencies must look at a number of types of actions and effects, including those actions and effects that are cumulative. Cumulative actions are those that “have cumulatively significant impacts and should therefore be discussed in the same impact statement.” 40 CFR § 1508.25(a)(2). Similar actions include those that have “common timing or geography.” *Id.* at § 1508.25(a)(3). A project’s “cumulative impact,” is

the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 CFR § 1508.7.

NEPA requires that mitigation measures be reviewed in the NEPA process -- not in some future decision. “[O]mission of a reasonably complete discussion of possible mitigation measures would undermine the ‘action-forcing’ function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects.” Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 353 (1989).

NEPA regulations require that an EIS: (1) “include appropriate mitigation measures not already included in the proposed action or alternatives,” 40 CFR § 1502.14(f); and (2) “include discussions of: . . . Means to mitigate adverse environmental impacts (if not already covered under 1502.14(f)).” 40 CFR § 1502.16(h). The CEQ also has stated that: “All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperation agencies. . . .” Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, 46 Fed. Reg. 18026, 18031 (March 23, 1981). According to the CEQ, “[a]ny such measures that are adopted must be explained and committed in the ROD.” Forty Questions, *supra*, 46 Fed. Reg. at 18036.

In addition, under 40 CFR § 1505.2(c), the agency is required to:

State whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not. A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation.

The “purpose and need” and the “proposed action” are two different concepts. NEPA requires agencies to prepare a “purpose and need” statement which “specif[ies] the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” 40 CFR § 1502.13. The “proposed action” grows out of an underlying purpose that is set forth as the purpose and need.

An agency’s discretion to determine the purpose and need of a project is not unfettered. Courts require an agency’s definition of purpose to be reasonable. City of Carmel-by-the-Sea v. United States Dep’t of Transp., 123 F.3d 1142, 1155 (9th Cir. 1997); Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 195-96 (D.C. Cir. 1991), *cert. denied*, 502 U.S. 994 (1991).

Courts impose this standard to ensure that agencies do not avoid NEPA’s requirements by defining a project’s purpose so narrowly as to preclude consideration of reasonable alternatives. Simmons v. United States Army Corps of Eng’rs, 120 F.3d 664, 666 (7th Cir. 1997); City of New York v. United States Dep’t of Transp., 715 F.2d 732, 743 (2d Cir. 1983), *cert. denied*, 456 U.S. 1005 (1984); Citizens Against Burlington, 938 F.2d at 196. Consideration of alternatives is “the heart of the environmental impact statement.” 40 CFR § 1502.14.

NEPA requires that federal agencies provide a detailed evaluation of alternatives to the proposed action in every environmental impact statement. 42 U.S.C. § 4332(C)(iii); 40 CFR §

1502.14(a). This discussion of alternatives is essential to NEPA's statutory scheme and underlying purpose:

The goal of the statute is to ensure "that federal agencies infuse in project planning a thorough consideration of environmental values." The consideration of alternatives requirement furthers that goal by guaranteeing that agency decision-makers "[have] before [them] and take[] into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance." NEPA's requirement that alternatives be studied, developed, and described both guides the substance of environmental decision-making and provides evidence that the mandated decision-making process has actually taken place. Informed and meaningful consideration of alternatives -- including the no action alternative -- is thus an integral part of the statutory scheme.

Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988), *cert. denied*, 489 U.S. 1066 (1989) (citations and emphasis omitted), *cited in Alaska Wilderness*, 67 F.3d at 729. Indeed, NEPA's implementing regulations recognize that the consideration of alternatives is "the heart of the environmental impact statement." 40 CFR 1502.14, *quoted in Alaska Wilderness*, 67 F.3d at 729, 730. The agency must "[r]igorously explore and objectively evaluate **all reasonable alternatives**" to a proposed action. 40 CFR § 1502.14(a) (emphasis added); *see also City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990).

The CEQ regulations emphasize that:

[The alternatives] section is the heart of the environmental impact statement. Based on the information and analysis presented in the sections on the Affected Environment and Environmental Consequences, it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public. In this section, agencies shall:

- (a) Rigorously explore and objectively evaluate all reasonable alternatives
- (b) Devote substantial treatment to each alternative considered in detail
- (c) Include reasonable alternatives not within the jurisdiction of the lead agency.
- (d) Include the alternative of no action.
- (e) Identify the agency's preferred alternative or alternatives
- (f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

40 CFR § 1502.14.

In a similar fashion, an EIR is a detailed statement prepared under the California Environmental Quality Act, Public Resources Code §§ 21000-21178 ("CEQA") describing and analyzing all significant environmental effects on the environment of a proposed project and discussing ways of mitigating or avoiding those effects. Pub. Res. Code §21100; 14 Cal Code Regs § 15362. The purpose of an EIR "is to inform the public and its responsible official of the

environmental consequences of their decisions *before* they are made.” Laurel Heights Improvement Association v. Regents of University of California, 6 Cal. 4th 1112, 1123 (1993) (emphasis in original) (citations omitted).

An EIR should provide decision making bodies and the public with detailed information about the effect a proposed project is likely to have on the environment, to list ways in which the significant effects of a project might be avoided or minimized, and to indicate alternatives to the project. Pub. Res. Code § 21061; 14 Cal Code Regs. § 15002. “The ultimate decision of whether to approve a project, be that decision right or wrong, is a nullity if based upon an EIR that does not provide the decisionmakers, and the public, with the information about the project that is required by CEQA.” Santiago County Water Dist. v. County of Orange (1981) 118 Cal. App. 3d 818, 829. “The error is prejudicial ‘if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process.’” San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus (1994) 27 Cal. App. 4th 713, 721-722.

California courts have emphasized that an EIR should: disclose all relevant facts; provide a balancing mechanism whereby decision makers and the public can weigh the costs and benefits of a project; provide a means for public participation; provide increased public awareness of environmental issues; provide for agency accountability; and provide substantive environmental protection. Because of the shortcomings discussed below, the draft EIR/EIS for the proposed project is inadequate to meet both the procedural and substantive mandates of CEQA.

One of the fundamental objectives of CEQA is to facilitate the identification of “feasible alternatives or feasible mitigation measures which will avoid or substantially lessen” significant environmental effects. Pub. Res. Code § 21002. Under CEQA, “public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects. . . .” Public Resources Code § 21002. Consequently, an EIR must accurately identify impacts, provide meaningful alternatives that will avoid those impacts, and provide detailed feasible measures to mitigate significant environmental impacts identified in the EIR. See 14 CCR §15126. The County’s duty to provide a detailed analysis of environmental impacts of the proposed project and to impose enforceable mitigation measures cannot be deferred to a later stage of environmental analysis.

30-1

In this instance, the draft EIR/EIS fails to provide concrete detailed alternatives that would avoid the significant impacts of the project. For example, both of the alternatives regarding water resources fail to provide essential information about the cost and availability of alternative water resources and the feasibility of obtaining such resources. In addition, no alternatives are provided that would avoid impacts to air quality or biological resources. In sum, the draft EIR/EIS fails to adequately analyze any alternative that would avoid the significant impacts of the project in violation of CEQA.

The draft EIR/EIS fails to identify or analyze feasible mitigation measures, fails to include an adequate monitoring program for mitigation measures, and fails to ensure that the proposed mitigation consists of specific, enforceable measures. Pub. Res. Code §§ 21001(g),

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21081.6; CEQA Guidelines § 15126.4. CEQA requires mitigation measures to be “fully enforceable through permit conditions, agreements, or other legally-binding instruments.” CEQA Guidelines § 15126.4(a)(2). CEQA requires the adoption of binding mitigation in order to reduce a project’s environmental impacts. “Passing references to the mitigation measures are insufficient to constitute a finding,” because nothing binds the agency “to follow these measures.” Citizens for Quality Growth v. Mount Shasta 198 Cal.App.3d 433, 442.

30-2
Con't.

For many impacts identified no mitigation measures are provided at all and, where mitigation measures are mentioned, they fail to meet the standards for detailed enforceable measures as required by CEQA. See 14 CCR §15126. CEQA does not allow preparation of mitigation plans after a project has been approved. In this instance, for nearly six years the County has allowed portions of the project go forward, along with significant impacts to the environment, particularly to groundwater resources, without requiring any mitigation measures for those impacts in violation of CEQA. Mitigation for these past impacts must also be provided before this project can be approved because formulation of mitigation measures now for the project as a whole is feasible. The County should have halted the expansion or adopted specific design criteria or performance standards as mitigation measures for this project that would protect the environment and ensure that no environmental harm would occur during the intervening years since the Court struck down the earlier negative declaration on October 26, 2000 and the time that the final decision is made on the now-proposed project – a period that has already stretched over nearly six years. See Sacramento Old City Association et al. v. City Council of Sacramento, 229 Cal. App. 3d 1011, 1028-9 (1991); Laurel Heights Improvement Assn. v. Regents of University of California, 47 Cal. 3d 375, 418 (1988). The County’s failure to do so is an ongoing violation of CEQA.

30-3

The draft EIR/EIS also fails to adequately identify and analyze cumulative impacts and growth inducing impacts of the project. See CEQA Guidelines §§ 15126.2, 15130. In addition, the Draft EIR fails to adopt binding mitigation for the growth related impacts resulting from the project as required by CEQA section 21081.

30-4

B. Environmental Setting or Baseline:

CEQA requires that the EIR accurately describe the environmental setting of the project. 14 CCR § 15125. See also 40 CFR § 1502.15 (identical requirement for NEPA EIS). An EIR based on an inaccurate description of the environmental setting or baseline may, in turn, lead to an inaccurate description and analysis of the environmental impacts of the project, inadequate review of alternatives, and inaccurate assessment of the mitigation measures needed to avoid or minimize the significant impacts of the project. San Joaquin Raptor/Wildlife Rescue Ctr. v. County of Stanislaus (1994) 27 Cal. App. 4th 713; Cadiz Land Co. v. Rail Cycle (2000) 83 Cal. App. 4th 74.

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In San Joaquin Raptor the court found that “the description of the environmental setting of the project site and surrounding area is inaccurate, incomplete and misleading; it does not comply with State CEQA Guidelines section 15125.” Id. at 728-29. As the court noted: “It is true that the lead agency is not required to conduct all suggested testing or experimentation. Society for California Archaeology v. County of Butte (1977) 65 Cal.App.3d 832, 838-839. However,

the FEIR does not reflect even minimal investigation into the exact location and extent of riparian habitats either adjacent to or within the site. If an investigation specifically considering the presence and extent of wetland areas adjacent to and within the site was conducted and the results demonstrated there were no wetlands within the site, this should have been fully explained in the FEIR. The investigators should have been identified, the actions taken by them disclosed and their conclusions supported by facts and analysis. (Cf. Laurel Heights, supra, 47 Cal.3d at p. 410; Marin Municipal Water Dist. v. KG Land California Corp., supra, 235 Cal.App.3d 1652, 1662-1663.).”

Similarly, here, BLM and the County have failed to provide even the most basic information about many of the environmental resources of the project area that may be affected by the proposed project.

The BLM lands at issue here are part of the California Desert Conservation Area (“CDCA”) which Congress established as part of FLPMA. 43 U.S.C. § 1781(c). In so doing, Congress declared that the California desert is a rich and unique environment teeming with “historical, scenic, archeological, environmental, biological, cultural, scientific, educational, recreational, and economic resources.” 43 U.S.C. § 1781(a)(2). Though vast, this desert and its resources are “extremely fragile, easily scarred, and slowly healed.” *Id.* Human activities can easily threaten rare and endangered species of wildlife and plants in this sensitive ecosystem. 43 U.S.C. § 1781(a)(3). BLM is charged with managing these fragile lands and “shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.” 43 U.S.C § 1732(b). BLM’s failure to provide complete and accurate baseline data on the environmental resources of this area violates NEPA as well as BLM’s duties under FLPMA.

C. The EIR/EIS failed to analyze a reasonable range of alternatives.

NEPA requires that the EIS “rigorously explore and objectively evaluate all reasonable alternatives’ to a proposed plan of action that has significant environmental effects. 40 C.F.R. § 1502.14(a) (2000). This is ‘the heart’ of an EIS.” Natural Resources Defense Council v. U.S. Forest Service, 421 F.3d 797, 813 (9th Cir. 2005).

An EIR is required to describe a range of reasonable alternatives to the project, which would feasibly attain most of its basic objectives but would avoid or substantially lessen its significant effects. 14 Cal Code Regs § 15126.6(a). The County has a substantive duty to adopt feasible, environmentally superior alternatives. Pub. Res. Code § 21002, 14 Cal Code Regs §§ 15002(a)(3), 15021(a)(2). A lead agency cannot abdicate this duty unless substantial evidence supports a finding that the alternative is infeasible. See, e.g., Citizens of Goleta Valley v. Board of Supervisors, 197 Cal. App. 3d 1167, 1181 (1988).

The agencies appear to have fundamentally misunderstood CEQA’s requirement that alternatives be studied that will avoid the impacts of the proposed project. See 14 CCR § 15126.6(a). For example, the draft EIR/EIS states that impacts to the groundwater basin due to increased groundwater use is “significant and unavoidable” (3.3-77), when, in fact, the choice of either of the alternatives in the draft EIR/EIS -- use of Imperial Irrigation District (“IID”) water

for the proposed project either in part or in full -- would avoid this impact. The conclusion that the impact is “unmitigatable” is similarly false, by using full or partial IID water for the expansion the proposed project could indeed mitigate some impacts to the groundwater basin.

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Con't.**

The examination of only two project alternatives fails to provide the needed range of alternatives under either CEQA or NEPA. Also, the dismissal as “impractical” of any serious evaluation and consideration of a “no action” alternative violates NEPA and CEQA. (2.0-70). The fact that some of the proposed facilities have already been constructed before completion of the current environmental review does not justify relaxing the requirements to analyze all reasonable alternatives, including a no action alternative. US Gypsum proceeded with, and BLM, and the County allowed, construction of these facilities in reliance on the initial ruling at their own risk. There are measures that can be taken to reduce the existing mining and manufacturing operations, or mitigate and reclaim existing disturbance and impacts, and these alternatives must be legitimately considered as part of the “no-action” alternative.

Moreover, the lack of detail in the presentation of the two alternatives makes them appear to be nothing more than “straw men” that the agencies raise only to dismiss out of hand. For example, the draft EIR/EIS fails explain how the partial or full IID water alternatives would be carried out and fails to provide detailed explanations of the facilities that would be needed for transport and storage of the alternative water sources. CEQA and NEPA require more. This failure to properly analyze alternatives carries throughout the draft EIS/EIR. The agencies may not dismiss reasonable alternatives with out proper review based simply on statements that the information necessary to evaluate the alternative is not known. Lack of information must be remedied (40 C.F.R. § 1502.22), not used as an excuse to eliminate alternatives and arbitrarily narrow the environmental review.

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Even more importantly, neither of the alternatives appears to meet the requirements of either NEPA or CEQA. The draft EIR/EIS states that the “political and economic feasibility of obtaining Colorado River water pursuant to a service agreement with IID is unknown at this time.”² (2.0-74; see 2.0-77). The agencies cannot simply ignore the project proponent’s lack of commitment to search out and secure alternative water supplies for the project. The issues regarding the unacceptable impacts of drawing down the local aquifer were raised nearly 30 years ago (see, e.g., 3.3-34 (USGS modeling study initiated in 1977 in response to concerned regarding water quality)) and, even under the most recent proposal, the project proponent has had at least 8 years to investigate and secure contracts for such alternative sources of water. If the project proponent has indeed made steps to secure these rights, that information must be fully integrated into the EIS/EIR analysis.

Assuming, for the sake of argument alone, that alternative water supplies could not be secured by the project proponent, then the draft EIR/EIS in fact contains no meaningful analysis of any feasible alternatives and is per se invalid under both NEPA and CEQA. For example, the draft EIR/EIS fails to examine any alternative that would reduce the extent of the expansion, and

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² Oddly, in contrast, the suggested mitigation measures for water supply shortfalls simply assumes that alternative sources of high-quality potable water would be available for mitigation to replace domestic well water at a cost that would remain constant as of the time the impact occurred. See 3.3.72. Such assumptions are both improper, unsupported by the record, and entirely unfounded given the current water availability situation in California.

thus the amount of water used, or any alternative that would require additional water conservation measures to reduce water demand on site (see 2.0-17 to 18 discussing past water conservation measures as part of baseline conditions at plant site). In addition, the draft EIR/EIS rejects out of hand any alternative location for the plant expansion and does not even explore other locations that might have access to alternative sources of water. While it is clear that gypsum can only be quarried where it is found, it does not follow that the existing plant site is the only feasible location for manufacture of wallboard.

**30-8
Con't.**

C. The EIR/EIS fails to properly identify, analyze and avoid or mitigate impacts to Water Resources and Water Quality.

Attached to these comments and hereby incorporated herein is a “Technical Review of Groundwater Issues and Analyses: United States Gypsum Company Expansion/Modernization Project” prepared by Matthew P. Wiedlin, California Certified Hydrogeologist and California Professional Geologist of Wiedlin & Associates, Inc. This technical review presents a comprehensive analysis of the draft EIR/EIS, and identifies concrete shortcomings in the current analysis and detailed recommendations for ensuring the professional integrity of the EIR/EIS analysis. As stated in the Review, at 1:

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Overall the groundwater study does not identify specific technical objectives, provides inadequate presentation of field data, and inadequately documents groundwater modeling procedures and rationale. This lack of documentation along with a comparison of field measured groundwater levels to model predicted groundwater levels casts reasonable doubt on the reliability of the model to assess the impact the proposed increase in USG pumping will have on groundwater resources in the study area. As detailed in the following discussion, these inadequacies are sufficient to recommend that the groundwater study be re-drafted and resubmitted for public review.

Additional comments on groundwater issues follow.

1. Water Supply.

a. The Draft EIR/EIS Fails to Properly Identify and Analyze, Avoid or Minimize and Mitigate Impacts to Water Resources.

The draft EIR/EIS acknowledges that the project will cause significant impacts to water supply but fails to adequately identify or analyze the actual impacts that may occur. CEQA and NEPA require more. CEQA and NEPA require identification of the source of water for the project and examination of the environmental impacts that may result if that water supply is tapped for life of the project. See Santiago County Water Dist. v. County of Orange (1981) 118 Cal. App. 3d 818; Stanislaus Natural Heritage Project v. County of Stanislaus (1996) 48 Cal. App. 4th 182. Moreover, where, as here, the water supply is uncertain and a shortfall in those supplies is certain, the EIR must evaluate that issue, identify other alternative potential water sources, and identify and analyze the environmental consequences of tapping those water resources. Santa Clarita Org. for Planning the Environment (“SCOPE”) v. County of Los

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Angeles (2003) 106 Cal. App. 4th 715; Napa Citizens for Honest Government v. Napa County Bd. Of Supervisors (2001) 91 Cal. App. 4th 342, 371. Where there is remaining uncertainty that adequate water supply will be available, the EIR must provide specific, enforceable mitigation measures that will prevent the project from moving forward until water supply is secured. See Napa Citizens, 91 Cal. App. 4th at 374. The draft EIR/EIS fails on all counts.

As the County is well aware, in the past ten years the California Legislature has acted to require that for all projects of this size and scope a water availability assessment will be completed as an integral part of the environmental review process. Unfortunately, the draft EIR/EIS fails to meet the requirements of California Water Code §§10910-10915 (Water Supply Planning to Support Existing and Planned Future Uses). Given the scarcity of water in the state and the increasing demand for water resources for domestic, agricultural, industrial and environmental purposes, thorough and detailed water availability assessments are critical to any decisionmaking process that involves projects that will use large amounts of water over a significant period of time such as the proposed project here.

In this case, where there is no public water system that will supply the project, the County must prepare the water assessment including “a discussion with regard to whether the total projected water supplies, determined to be available by the . . . county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses.” Cal. Water Code § 10910. For groundwater basins such as this, the assessment must also include “information as to whether the . . . the basin will become overdrafted if present management conditions continue . . . and a detailed description . . . of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition. . . . An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.” Cal. Water Code § 10910 (emphasis added). “If the . . . county . . . concludes as a result of its assessment, that water supplies are, or will be, insufficient, the . . . county shall include in its water supply assessment its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies.” Cal. Water Code § 10911(a) (emphasis added). The County has violated the Water Code by failing to provide the mandatory water assessment, any description of efforts being under taken to eliminate the long-term overdraft of the groundwater basin, or a description of any plan for acquiring or developing additional water supplies. Rather, the draft EIR/EIS simply assumes that the existing overdraft of the groundwater basin, largely attributable to the past and ongoing use by the project proponent, will continue and worsen. The County should reconsider its duties under the Water Code and identify, evaluate, and adopt mandatory measures to eliminate the long-term overdraft of this unique and vital groundwater basin and require that alternative sources of water be acquired or developed before the proposed project can be approved.

Further, there is no certification by the County that water supplies for the project will indeed be available for the 80 year life of the project, either in the Ocotillo/Coyote Wells aquifer or in the area by the Quarry 3 well, as there cannot be. In fact, the draft EIR/EIS shows that the opposite is true – the proposed project’s use of groundwater for both the plant and quarry will come only at the expense of existing uses by local communities for drinking water and domestic

use and at the expense of other environmental resources as well. The draft EIR/EIS admits that the drawdown of the aquifer would have substantial effects on water supply for other existing users. However, it fails to acknowledge the possibly catastrophic impacts loss of reliable well water would have on existing communities and fails to examine other direct impacts such as drawdown of springs and creeks in the area and the impacts to the fragile biological resources of the region that could result.

In Stanislaus Natural Heritage Project v. County of Stanislaus (1996) 48 Cal. App. 4th 182, the court found the EIR deficient because it failed to address the procurement and impacts of a project on water supply. As the court explained: “The County in essence approved an EIR for a 25-year project when water for the project had not been assured beyond the first 5 years of the 15-year first phase of the project. The County knew neither the source of the water the project would use beyond the first five years, nor what significant environmental effects might be expected when the as yet unknown water source (or sources) is ultimately used.” Id. at p. 195. The draft EIR/EIS here has the same fatal flaw, the proposed project would admittedly increase the current rate of overdraft the Ocotillo/Coyote Wells aquifer over the course of 80 years and provides no information regarding a source of water that would be available to local residents once local wells ran dry. Even if such overdraft of a sole source drinking water aquifer were allowable, which it is not (see discussion below), CEQA requires that alternate sources of drinking water must be identified and impacts of utilizing those alternate sources must be analyzed before any project approval can go forward.

As the court concluded in Stanislaus, “In our view, the County’s approval of the project under these circumstances defeated a fundamental purpose of CEQA: to ‘inform the public and responsible officials of the environmental consequences of their decisions before they are made.’ The CEQA EIR process ‘protects not only the environment but also informed self-government.’” Stanislaus Natural Heritage Project, 48 Cal. App. 4th at 195.

In SCOPE, the Court found that the water services portion of the EIR was inadequate because “Instead of undertaking a serious and detailed analysis of [water] supplies, the EIR does little more than dismiss project opponents’ concerns about water supply. Water is too important to receive such cursory treatment.” SCOPE, 106 Cal. App. 4th at 723. Similarly here, the draft EIR/EIS fails to accurately identify and assess water supply issues. Although the conservation groups raised concerns regarding water supply in scoping comments, the draft EIR/EIS does “little more than dismiss project opponents’ concerns about water supply.” SCOPE, 106 Cal. App. 4th at 723. This is unacceptable.

For example, the draft EIR/EIS continues to use the same figures for USG’s claimed level of past water use that the Court of Appeals found could not be verified, in Sierra Club v. Imperial County, D0D034281 (October 26, 2000) at 7 n. 2. Because the County has failed to provide accurate assessments of past and ongoing groundwater use by USG, the “analysis” in the draft EIR/EIS is built on a weak foundation at best. Similarly, in the alternatives discussion in the EIR/EIS simply dismisses the viability of IID water for the expansion project without assessing its availability.

Going forward, at minimum, any project approval must include mandatory monitoring of all groundwater extractions by US Gypsum at all wells and public reporting of that data on a monthly basis. Only with this information can the public and decisionmakers know whether thresholds of allowable ground water use by USG, that must be set in any permits issued by the County for this project, have been met or exceeded. And only in this way can the County assess whether the thresholds for initiating the enforceable, detailed mitigation measures (that must be developed before this project can be approved) have been met.

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The draft EIR/EIS also fails to look at any conservation measures that could reduce the amount of water being proposed for use. Thus, it is impossible for the public or decision makers to know whether the industrial process could be altered or improved to reduce the use of water and thereby reduce impacts to water supply. To state the obvious, this is a hot desert environment and water is a scarce and precious resource. Waste of water, whether groundwater or surface water, cannot be sanctioned and indeed cannot be not tolerated.

30-12

The identification and analysis of impacts to various biological resources from the drawdown of the aquifers due to the plant and quarry water extractions is also inadequate. At minimum, it is clear that drawdown of any aquifer may damage and/or cause mortality to vegetation, and impact flows at springs and seeps throughout the area. Wildlife dependent on these water sources would decline and potentially be extirpated. Pumping ground water for the 80 year life of the project could also cause the underlying structure of the aquifer to collapse and could result in ground subsidence and permanent loss of water storage capacity or infiltration by lower quality water. None of these impacts has been adequately identified or analyzed in the draft EIR/EIS, no less, avoided or minimized and mitigated.

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The mitigation measures proposed for the impacts to water supply are entirely inadequate under CEQA. They provide no enforceable standards but rather – astonishingly – leave the choice of mitigation measures to the project proponent “at its election.” (3.3-71). Even more absurd, the mitigation measures will not be automatically triggered when domestic users experience shortfalls in supply, but must wait for the Imperial County Groundwater Management Committee to make a “determination” of the “extent to which the Proposed Action will be considered as contributing to the decreased water levels in the Ocotillo area.” (3.3-72). This would leave local residents high and dry while the project proponent is free to drag out the bureaucratic process and attempt to convince the Committee regarding the extent of its “contribution” to the overdraft of the aquifer. Moreover, the mitigation measure does not even guarantee full compensation for domestic users of the lost water over time, but only replacement water “at a cost that does not exceed the cost to the affected party at the time the impact occurred.” *Id.* Thus, depending on a determination of when “the impact occurred,” if the cost of replacement water rises later, the project proponent will not have to pay any additional costs.

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The draft EIR/EIS also fails to explain how substituting uncertain supplies of imported water for the high quality local water would provide adequate “mitigation” for the loss of clean, potable local water to domestic users from reliable on-site domestic wells.

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b. The Draft EIR/EIS Fails to Identify and Analyze Impacts to Federal Reserved Water Rights.

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The EIS/EIR fails to mention or account for possible impacts on federal reserved water rights that may be associated with many or all of the surface water sources protected pursuant to Public Water Reserve 107 (“PWR 107”), established by Executive Order in 1926. BLM has not determined the nature, extent, and amount of these federal reserved water rights (and related withdrawn lands) within the areas affected by the groundwater pumping. Indeed, based on the lack of detailed information in the draft EIR/EIS, the agencies appear to have failed to conduct the required inventory of the resources affected to state with certainty the impacts on surface water sources. Table 1.0-1 details the BLM authorities under which the project was analyzed and it fails to mention any PWR 107 analysis. EIS/EIR at 1.0-6.

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Con't.**

At a minimum, the EIS/EIR admits that groundwater pumping and aquifer drawdown will impact springs and waterholes located miles from the pumping, such as those supporting desert pupfish. (3.5-23; 3.5-43). Under federal public land law, BLM must ensure that any springs or water sources are not illegally degraded by US Gypsum’s dewatering – a duty BLM failed to meet in this case.

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Water flows in springs and waterholes on public land in the West are reserved for public use by Public Water Reserve # 107 (“PWR 107”), which was created by Executive Order by President Calvin Coolidge in 1926. PWR 107 provides:

[I]t is hereby ordered that every smallest legal subdivision of public land surveys which is vacant, unappropriated, unreserved public land and contains a spring or water hole, and all land within one quarter of a mile of every spring or water hole located on unsurveyed public land, be, and the same is hereby, withdrawn from settlement, location, sale, or entry, and reserved for public use in accordance with the provisions of Section 10 of the Act of December 29, 1916.

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Executive Order of Apr. 17, 1926, previously codified at 43 C.F.R. § 292.1 (1938).³ According to the Interior Department:

Assuming that the water is a spring and is on public land it would be subject to the Executive Order of April 17, 1926, establishing Public Water Reserve No. 107. The Executive Order withdrew all springs and water holes on public lands and the surrounding acreage [smallest legal subdivision or all lands within one quarter mile for unsurveyed lands]. It was designed to preserve for the general public lands containing water holes and other bodies of water needed or used by the public for water purposes.

³ See also GENERAL LAND OFFICE, DEPARTMENT OF INTERIOR, CIRCULAR 1066, 51 I.D. 457-58 (1926) (“[t]he above order [PWR #107] was designed to preserve for general public use and benefit unreserved public lands containing water holes or other bodies of water needed or used by the public for watering purposes.”). The 1926 Executive Order and withdrawal were promulgated under the authority of Section 10 of the Stock-Raising Homestead Act of 1916, 39 Stat. 865, which provided that withdrawn “lands containing water holes or other bodies of water needed or used by the public for watering purposes ... shall, while so reserved, be kept and held open to the public use for such purposes....”

Desert Survivors, 80 IBLA 111, 115 (1984) (rejecting BLM approval of a mining plan that did not adequately consider and protect water sources under PWR 107).

PWR creates a federal reserved water right in water flows that must be maintained to protect public watering uses. U.S. v. State of Idaho, 959 P.2d 449, 453 (Idaho 1998) *cert. denied Idaho v. U.S.*, 526 U.S. 1012 (1999); Cappaert v. United States, 426 U.S. 128, 145 (1976). Under this Executive Order, the agencies cannot authorize activities that will impair the public use of any of those reserved waters.

BLM’s approval of the US Gypsum expansion that could draw down the reserved flows of springs or waterholes on public land would not be in compliance with this requirement. As the Interior Department has held, “if this is a public water reserve of the class contemplated by Executive Order of April 17, 1926, a mineral entryman cannot legally divert or make inaccessible the water.” Memorandum, Interior Dept. Regional Counsel to Manager, Land & Survey Office, dated September 24, 1953, *quoting* 54 I.D. 353, 357, 1934 I.D. LEXIS 29, *11-12 (1934); 55 I.D. 371, 377, 1935 I.D. LEXIS 52, *18 (1935).

In another Interior Department decision related to mining and PWR 107, the Department responded to the question: “[I]s there anything to bar the conduct of under-ground mining operations which by their very nature might tend to drain surface springs in a withdrawn water-hole....?”

[T]he withdrawal of a spring or water hole contemplated in the Executive Order of April 17, 1926 takes effect as of the date of the Order or at the time the spring comes into existence. If the water in question is of the class contemplated in the Executive Order of June [sic, April] 17, 1926, and was in existence prior to mining locations, it appears that the decisions set forth in our memorandum to the Manager of the Land and Survey Office dated September 24, 1953, would apply and the mining claimants could not conduct their operations in a manner that would destroy the public water reserve.

Letter from Interior Dept. Regional Counsel, dated January 5, 1954, at 2. Therefore, BLM can only approve operations that will protect the existing water levels and uses of these springs at all times.

The draft EIS/EIR failed to discuss the federal reserved water rights associated with PWR 107. BLM has not determined the nature, extent, and amount of these federal reserved water rights (and related withdrawn lands) within the areas potentially affected by the groundwater use. BLM’s failure to review the impact US Gypsum will have on reserved water rights (and withdrawn lands), and BLM’s failure to determine the current nature, extent and amount of these rights, waters, and lands, violates its duty under NEPA, FLPMA, and the Executive Order.⁴

In addition to failing to identify and protect any reserved water rights under PWR 107, BLM has violated its substantive duty under FLPMA to manage and protect these waters. FLPMA mandates that BLM “shall by regulation or otherwise, take any action necessary to

⁴ NEPA requires BLM to study the impacts to all resources that might reasonably be impacted. Kern v. BLM, 284 F.3d 1062, 1066 (9th Cir. 2002)

prevent unnecessary or undue degradation of the lands.” 43 U.S.C. § 1732(b). Mineral Policy Center v. Norton, 292 F.Supp.2d 30, 42 (D.D.C. 2003). Here, BLM made no finding, or did any analysis at all, as to whether the groundwater pumping would unduly degrade these public water and land resources.

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Con't.

Additionally, under the 3809 regulations, BLM must “take[] into consideration the effects of operations on other resources and land uses, including those resources and uses outside the area of operations.” 43 CFR §3809.0-5 (2000). Since it never even analyzed the extent of injury to its reserved waters and lands, BLM could not have “taken into consideration” these important resources.

BLM is obligated to protect one of the most important resources in this arid region – water. Federal courts have recognized BLM’s duty under FLPMA to “take appropriate action ... for the management and protection of public and Bureau of Land Management Lands.” Sierra Club v. Andrus, 487 F.Supp. 443, 448 (D.D.C. 1980), *aff’d* Sierra Club v. Watt, 659 F.2d 203, 206 (D.C. Cir. 1981). Such duty arises “in the event of a real and immediate water supply threat” to federal resources, including water resources. *Id.*⁵

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Such actions may include, but are not limited to: (1) asserting reserved water rights, (2) acquiring water rights and rights-of-way, (3) **denying the [proposed action] which may constitute or aid a threat to ... resources**, or (4) bringing trespass or nuisance actions if appropriate.

Andrus, 487 F. Supp. at 448 (emphasis added).

Importantly, PWR107 does not only reserve waters that “support sizeable riparian areas,” or “provide flow to adjacent creeks.” PWR107 applies to isolated springs that are “non-tributary” to flowing streams, as well as those that form the headwaters of streams (i.e., “tributary” springs.). See U.S. v. City and County of Denver, 656 P.2d 1, 32 (Colo. 1982).

Lastly, and related to the section immediately below on water quality, the BLM has the independent duty to ensure that all water quality standards are met in waters affected by the project at all times under Section 313 of the Clean Water Act (in addition to the water quality protection requirements contained in the BLM 3809 regulations).

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Under the Clean Water Act, all federal agencies must comply with state water quality standards, including a state's antidegradation policy. 33 U.S.C. § 1323(a). Judicial review of this requirement is available under the Administrative Procedure Act. Oregon Natural Resources Council v. United States Forest Service, 834 F.2d 842, 852 (9th Cir.1987).

Idaho Sporting Congress v. Thomas, 137 F.3d 1146, 1153 (9th Cir. 1998).

⁵ Although the language in the case focused on threats to waters in National Parks, the court specifically extended its reasoning to BLM land. “The Court also concludes that the Federal Lands Policy and Management Act, creates similar duties and entails comparable discretion, as that described above, for the management and protection of public and Bureau of Land Management Land.” Andrus, 487 F. Supp. at 448.

This duty includes protecting springs and water resources from being dewatered such that they do not meet their beneficial uses. The U.S. Supreme Court has held that:

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Con't.

The text [of the CWA] makes it plain that water quality standards contain two components. We think the language of § 303 is most naturally read to require that a project be consistent with *both* components, namely, the designated uses *and* the water quality criteria. **Accordingly, under the literal terms of the statute, a project that does not comply with a designated use of the water does not comply with the applicable water quality standards.**

PUD No. 1 of Jefferson County v. Washington Department of Ecology, 511 U.S. 700, 714-715 (1994) (italics emphasis in original, bold emphasis added). The dewatering also violates federal and state antidegradation regulations. According to federal regulation, applicable antidegradation policies “shall, at a minimum, be consistent with . . . [e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.” 40 CFR §131.12(a)(1). Under this regulation, “**no activity is allowable . . . which could partially or completely eliminate any existing use.**” PUD No. 1, 511 U.S. at 718-19 (emphasis added)(citing EPA, Questions and Answers on Antidegradation 3 (Aug. 1985)).

2. Water Quality:

a. The Proposed Project Will Violate Sole Source Aquifer Protections of the Safe Drinking Water Act.

The project as proposed will lead to overdraft of the local aquifer which will impair local residents’ access to high quality potable water. The draft EIR/EIS fails to adequately address alternatives that could avoid this significant impact and the proposed mitigation measures do not provide sufficient mitigation for the loss of this unique and vital local resource.

The Ocotillo-Coyote Wells Aquifer was designated as a sole source aquifer by the EPA on September 10, 1996. 61 Fed. Reg. 47752-53. The EPA determined that the aquifer “serves as the ‘sole source’ of drinking water for the residents of Ocotillo, Coyote Wells, Yuha Estates and Nomirage.” *Id.* at 47753. Further, the EPA determined that the aquifer should be protected because “[t]here is no economically feasible alternative drinking water source near the designated area.” *Id.* As the EPA noted the boundary of the sole source aquifer area at the Elsinore Fault “separates the sole source aquifer area, which contains high quality, potable water, from high saline, non-potable water to the east of the fault.” *Id.* This designation protects this aquifer from contamination by projects such as USG’s proposed expansion whether by actively polluting the water source or by degradation of water quality due to excessive pumping and overdraft.

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The Safe Drinking Water Act protects drinking water for communities. The draft EIR/EIS tries to obscure the importance of the sole source aquifer designation to preserve safe drinking water for local residents by repeatedly noting that the Ocotillo-Coyote Wells Aquifer “is the sole source of domestic and commercial/industrial water supply for the area.” 3.3-11 to 12

(emphasis added); see also *Id.* at 3.3-2 (“communities, USG and several other commercial/industrial and agricultural users, depend on the Ocotillo/Coyote Wells Groundwater Basin as their source of potable water”). Despite USG’s attempt to confuse the issue, the law is clear – the sole source aquifer is to be protected and preserved to provide save drinking water to local residents.

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Con't.

b. The draft EIR/EIS is inadequate because it fails to identify all water quality impacts and fails adequately analyze, avoid, or minimize and mitigate impacts to water quality that are identified.

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No where in the draft EIR/EIS have the agencies identified and analyzed impacts to water quality from waste water discharges. The draft EIR/EIS only lists existing NPDES and WDR permits and the need for additional permits; it does not identify the contents of such waste discharges, the potential impacts to water quality, or discuss any alternative that would avoid such impacts or measures to minimize and mitigate such impacts. Obtaining permits from state and federal agencies for waste water discharges is necessary for the project to go forward, but merely stating that such permits must be obtained is not sufficient to comply with either CEQA or NEPA.

The draft EIR/EIS also fails to meet the most basic requirements of CEQA and NEPA in its discussion of impacts to water quality from the continued groundwater pumping. Rather than identify and analyze the impacts, and seek ways to avoid them, the draft EIR/EIS attempts to minimize the significance of the impacts and dismisses the alternatives that could avoid these impacts and secure the long-term viability of this critical potable water resource.

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The suggested mitigation measures likewise fail to meet even the most basic requirements of CEQA. For example, Mitigation Measure 3.3-2, for impacts to water quality affecting individual well owners, fails to identify the expected amount of replacement water that may be needed, any likely source of such water, or the impacts that tapping that water source may have on the environment. Thus, it violates both the Water Code’s requirement regarding water supply planning and fails to meet the most basic standards for mitigation measures under CEQA. This mitigation measure for well owners also hedges its commitments to provide any replacement water by including the caveat that “[t]he extent to which the Proposed Action will be considered as contributing to the decrease in water quality in the Ocotillo area, will be determined only after a review of the water quality data and a decision by the Imperial County Groundwater Management Committee (ICGMC).” (3.3-78 to 79). Thus, the mitigation measure has no clear trigger and is not readily enforceable. As a result, local well owners could be without potable water for extended periods of time while USG seeks a “determination” as to the “extent” to which its pumping contributed to the water quality decrease. Thus the proffered mitigation measure may not timely provide the replacement water it promises. Because water is necessary for survival in the desert, such delays are unacceptable. The only improvement in this proposed mitigation measure for loss of water quality over the proposed mitigation measure for loss of water supply is USG’s commitment to pay the entire incremental difference between the cost of well water and the cost of replacement water and the cost of any new hookup for the replacement water supply.

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Even more egregiously, the draft EIR/EIS fails to adopt measures that could avoid the impacts to water quality in the groundwater basin although the agencies admit that the impacts to water quality in the Basin will be irreversible. “[I]t would not be possible to restore Basin-wide water quality once it is degraded to concentrations at which the groundwater is no longer suitable for its current uses.” (3.3-81 (failing to provide any proposed mitigation measures for significant impacts to water quality of the basin)). The agencies cannot move forward with this proposal without revising the draft EIR/EIS to include detailed information about the alternatives it has chosen to review that could avoid this significant impact to water quality and protect the long-term viability of the aquifer as a source of potable drinking water. The agencies’ failure to include the necessary detail regarding impacts of the proposed project in this draft EIR/EIS or to examine alternatives that could avoid this significant impact, such as reducing the size of the expansion, additional water conservation measures, or water recycling, renders this document inadequate under both CEQA and NEPA.

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E. The EIR/EIS fails to properly identify, analyze and avoid or mitigate impacts to biological resources.

Given the number of federally listed species on the project site, the draft EIR/EIS is seriously and fundamentally flawed because it fails to adequately analyze the applicability of the Endangered Species Act (“ESA”) to the proposed project. Section 9 of the Endangered Species Act forbids the “take” of threatened and endangered species. 16 U.S.C. §1538, ESA §9; 50 C.F.R. § 17.31. Take is defined by the ESA as “harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in such conduct,” 16 U.S.C. § 1532(19), and harm “means an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.” 50 CFR §17.3. The FEIR will result in harm to the Peninsular bighorn sheep and desert pupfish, at minimum, through modification and degradation of critical habitat, and may result in harm to several other listed and sensitive species. Unfortunately, the draft EIR/EIS fails to adequately identify or analyze these issues but defers that analysis to the Section 7 consultation process with the U.S. Fish & Wildlife Service. While such consultation is necessary, it is not sufficient to meet the CEQA standards that require that the lead agency in the EIR to identify, analyze, avoid or minimize and mitigate impacts to listed species.

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Moreover, the failure to provide accurate detailed baseline information on biological resources underscores BLM’s failure to comply with both NEPA and FLPMA in this instance.

FLPMA requires that BLM prepare and maintain a current inventory of all public lands and their resources. 43 U.S.C. § 1711(a). See Center for Biological Diversity v. U.S. Bureau of Land Management, et al., 422 F. Supp. 2d 1115, 1166-68 (N.D. Cal. 2006) (holding that it was arbitrary and capricious for BLM to approve a project based on outdated and inaccurate information regarding biological resources found on public lands). BLM has failed to keep current inventory data on many resources of these public lands including, for example, the rare and listed plant species, and the condition of springs and riparian areas on and near the project site as evidenced by the scant treatment of these resources in the draft EIR/EIS. Without a clear

understanding of the current status of these public lands BLM cannot make a rational decision, thus, BLM cannot properly approve the proposed project based on inadequate inventory and incomplete information regarding the resources these public lands including, but not limited to, the status of soils, special status species, water resources, riparian vegetation, and springs. BLM's failure to maintain a current inventory of these resources violates both the spirit and letter of FLPMA. BLM's failure to properly identify and analyze impacts to these species and resources also violates the most basic requirements of NEPA and on that basis as well BLM cannot properly move forward with the approval of this project based on the existing environmental documents. See *CBD v. BLM*, 422 F. Supp. 2d at 1163-66 (holding that BLM violated NEPA by failing to adequately identify or analyze impacts of the project on the biological resources found on public lands within the CDCA).

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Con't.**

The Wildlife section (3.5) of the Draft EIR fails to adequately disclose, analyze, minimize, and mitigate impacts to the wildlife in and around the project site. While the Draft EIR discloses that a the Fish Creek Wilderness Area and West Mesa Management Area would be affected by the project, it fails to consider the habitats in the Yuha Desert and San Sebastian Marsh/San Felipe Creek Areas of Critical Environmental Concern (ACECs), the Anza Borrego State Park (which the railroad from the quarry passes through), and the Carrizo Badlands State Park Wilderness Area, (which borders the US Gypsum patented claims for the Shoveler Annex and is about 1/8 mile from the Vallecito Mountains State Park Wilderness Area.). The DEIR fails to consider the impact of the project on all possible species in the area and thus fails to present real mitigation measures.

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CEQA requires all environmental impacts to be considered, including impacts to common species. While table 3.5-1 lists Common Species Observed on U.S. Gypsum's Quarry, the results of surveys of the Plant and the Proposed Quarry Well-Site Pipeline Alignment are much less clear. The sections regarding the survey results of the Plant and Proposed Quarry Well-Site Pipeline Adjustment make no mention of common species. Additional tables of survey results for these areas should be included to show that such surveys of common species were, in fact, properly conducted.

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Furthermore, the DEIR fails to adequately analyze impacts to species with habitat on the project site, but not found during surveys. Negative surveys do not mean that the species does not utilize the habitat on the project site; it simply means that the species was not present at the time of the survey. The project will eliminate suitable habitat for sensitive species and contribute to continued habitat fragmentation, and destruction. The elimination of marginal or immature habitat, because it presently does not meet the ideal habitat for sensitive species, will prevent the species from ever using that habitat in the future during dispersal and/or colonization. These impacts must be addressed and mitigated.

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Even if it were proper to assume that no rare, threatened or endangered species currently occupy the project area, which it is not, that would not relieve the USG from the duty to identify and analyze impacts to these species due to the fact that the project area contains valuable high quality habitat that these species will need in the future in order to adequately recover. In other words, just because habitat is not currently occupied does not mean the habitat is unnecessary or inessential to conservation of the species which includes both survival and recovery of the

species. To the contrary, every acre of habitat that is left is critically important to the future recovery of the sensitive species. Therefore, without adequate current surveys to the contrary, the Draft EIR must assume that species associated with the project area are present and that, even if these species are not present, the loss of high quality unoccupied habitat to development may directly, indirectly, and cumulatively impact the conservation of these species.

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Con't.**

Impacts to sensitive species and their habitat should be fully analyzed and mitigated. Species are categorized as sensitive because of their potential to become threatened or endangered in the future. Impacts from human development, urbanization, habitat alternation and fragmentation, are some of the biggest threats to fish and wildlife. CEQA requires a mandatory finding of significance if a project has the potential to reduce the numbers or restrict the range of an endangered, rare or threatened species. CEQA Guidelines § 15065. Direct mortality of sensitive species is a significant impact and must be analyzed in depth as a significant impact. In order to determine the significance of the impact to sensitive species, the EIR should disclose a quantified analysis of impacts to species populations resulting from project activities. Additionally, the results of numerous individual projects eliminating small habitat fragments are cumulatively considerable. The project cannot rationalize impacts to sensitive species and their habitat as insignificant without mitigation. The Draft EIR must fully mitigate the impacts of habitat destruction.

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The direct and indirect effects of the project will impact a host of rare, sensitive, threatened and endangered species, but not limited to, the following: the desert pupfish (*Cyprinodon macularis*), desert tortoise (*Gopherus agassizii*), barefoot banded gecko (*Coleonyx switaki*), chuckwalla (*Saromalus obesus*), peninsular bighorn sheep (*Ovis canadensis*), flat-tailed horned lizard (FTHL) (*Phrynosoma mcallii*), Carlson's dune beetle (*Anomala calsoni*), Hardy's dune beetle (*A. hardyroum*), Andrews's dune scarab beetle (*Pseudocotalpha andrewsi*), Le Conte's thrasher (*Tomostoma lecontei*), loggerhead shrike (*Lanius ludovicianus*), black-tailed gnatcatcher (*Polioptila melanura*), Prairie falcon (*Falco mexicanus*), Golden eagle (*Aquila chrysaetos*), Burrowing owl (*Athene cunicularia*), Ferruginous hawk (*Buteo regalis*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), merlin falcon (*Falco columbaris*), pallid bat (*Antrozous pallidus*), California mastiff bat (*Eumops perotis californicus*), California leaf-nosed bat (*Macrotus californicus*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), spotted bat (*Euderma maculatum*), Townsend's big-eared bat (*Plecotus townsendii pallescens*), American badger, and the Colorado Valley woodrat (*Neotoma albigula*).

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The species identified above qualify for heightened scrutiny under CEQA. The Legislature and the Secretary of Resources have determined that certain kinds of impacts are necessarily significant. "Mandatory findings of significance" are required for interference with species designated by state, federal, and scientific agencies as endangered, rare, or threatened per CEQA guidelines 15065. The Draft EIR's failure to properly apply CEQA section 15065 is fatal flaw that makes the Draft EIR deficient. The Draft EIR states that impacts to biological resources are "potentially" significant not significant *per se* as required by CEQA section 15065. Mandatory findings of significance are mandatory, not potential. Project activities will result in mortality of species through death due to impact with vehicles, pets, human disturbance.

Additionally, habitat loss is one of the biggest threats to species survival and the loss of habitat for these species is significant per CEQA.

**30-32
Con't.**

1. Species Protected Under the ESA and CESA:

- a. Endangered Peninsular bighorn sheep: The proposed project will destroy and fragment essential habitat designated as critical habitat and may significantly impact the recovery of the species.**

The draft EIR/EIS fails to address all significant impacts to the bighorn sheep and fails to establish meaningful mitigation measures.

QUARRY IMPACTS:

The Quarry is entirely within the Critical Habitat of the peninsular bighorn. Destruction or adverse modification of a designated Critical Habitat is prohibited by law. Any direct or indirect alteration that appreciably diminishes the value of the Critical Habitat for the survival or recovery of the listed species is considered to be adverse or destructive modification. Whether and to what extent the project will have an adverse impact on the Critical Habitat must be established in an impact analysis. Furthermore, the Critical Habitat designation necessitates that a validity report be obtained prior to any patent approval.

The bighorn sheep's survival is very specific to its habitat because the species exists in small, isolated mountain ranges as distinct metapopulations. 30 to 80 populations have gone extinct in the past 60 years. (Epps, et al., "Effects of Climate Change on Population Persistence of Desert-Dwelling Sheep in California" 18 Conservation Biology at 102, 103). The survival of the bighorn requires a diversity of open slopes and ridgelines which are crucial components of the bighorn habitat. Steep, open slopes and ridgelines offer unobstructed views of wide areas and facilitate predator evasion. Ridge benches and canyon rims adjacent to steep slopes or escarpments are also used for lambing areas. Finally, slopes and ridgelines provide shelter in both excessive heat and severe storms.

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Fragmentation of habitat threatens the bighorn's survival. Land use conversions and linear developments (highways) have partially or completely eliminated the possibility of migrations between some mountain ranges and prevent genetic exchange and demographic "rescue" among populations. Interstate 10 prevents sheep from migrating between the San Bernadino Mountains and the San Jacinto Mountains. The cumulative impacts from the highway and other existing fragmentation factors in the bighorn habitat must be considered along with the impacts imposed by the project proposal.

While, the draft EIR/EIS USG 2002 field survey admits findings of the bighorn's occurrence on the ridgeline northeast of project site, the report attempts to gloss over this finding by explaining that the ridgeline was not regularly used by the bighorns because "they would be more likely to keep to the ridgetops to the south, southwest and northeast rather than to travel across the Quarry itself." (3.5-21) This explanation actually implies that the existence of the

Quarry already impairs bighorn movement. The extent to which the Quarry already impacts the bighorn must be assessed in addition to the additional impact that increased construction and development of the Quarry will cause.

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Con't.**

The draft EIR/EIS asserts that “surrounding undeveloped open space would continue to provide adequate travel routes around the existing and proposed Quarry operations.” (3.5-22) without providing any proof as to what those travel routes are. The draft EIR/EIS is statement of analysis, not assumption. If the bighorn are utilizing travel routes to go around the current Quarry, evidence of these routes should be obtained so that analysis of whether these travel routes are adequate can be conducted. In the event that the bighorn already has “adequate travel routes”, why the routes would remain sufficient in spite of increased activity at the quarry should also be explained with sufficient facts.

Finally, the stated mitigation solution to comply with the required Section 7 Consultation is inadequate. (Mitigation Measure 3.5-1d). Formal consultation with the USFWS is already required by law under the Federal ESA. The purpose of the Section 7 Consultation is to establish whether the proposed project is likely or not to jeopardize the continued existence of the species or result in an adverse modification of Critical Habitat. This is also the purpose of the impact analysis. The stated mitigation solution is altogether off the mark. Instead of proposing alternatives or additional measures, the so-called solution merely states why the actual impact is still undetermined.

In order to produce a meaningful EIR/EIS, USG should determine the actual extent and types of impact that the project will have on the bighorn and propose alternatives and actual mitigation measures; that detailed information should then be provided to the FWS along with the request for consultation.

NARROW-GAUGE RAILROAD ALIGNMENT:

The draft EIR/EIS states that the bighorn could cross the rail line to emigrate between the Fish Creek Mountains and other mountain ranges but downplays this fact by showing that published data have shown only one such occurrence. (3.5-27) These facts demand more analysis because they imply that the presence of the railroad has already affected bighorn movement. It is well known that bighorn avoid areas of high noise and traffic. “Bighorn sheep may alter their use of essential resources resulting in negative physiological effects or they may abandon traditional habitat as a result of human disturbance.” These disturbances include “increased noise, lighting, number of humans in sheep habitat” 66 FR 8650, 8651. The draft EIR/EIS should assess the current impact of the railroad and analyze the potential impact of an 89.5% increase in train trips.

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QUARRY NO. 3 AND WATER PIPE ALIGNMENT:

Quarry No. 3 and the water pipe alignment are within the narrow-gauge ROW where, as described above, bighorn would cross while emigrating. Construction of well and pipeline would impact not only the movement of the bighorn during construction, but potentially the longterm behavior of the bighorn. The draft EIR/EIS erroneously sights the following effects as

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short term: startle effects related to noise and human activity, habitat degradation, fugitive dust, and soil contamination from equipment fluids. All these effects are likely to have serious consequences for an endangered species that exists in small isolated populations. “Bighorn sheep may alter their use of essential resources resulting in negative physiological effects or they may abandon traditional habitat as a result of human disturbance.” These disturbances include “increased noise, lighting, number of humans in sheep habitat” 50 CFR Part 17, pg. 8651.

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Con't.**

A proper draft EIR/EIS should first determine what the immediate and direct effects will be and then describe why the effects should be characterized as short or long term. Short term implies that the population will return back to normal. The initial baseline disturbance must first be established and reasons why it will return back to baseline must be supported by evidence. Furthermore, mitigation measures should specifically address known effects. Here, the draft EIR/EIS already determined that habitat degradation and soil contamination will occur. The mitigation measures should, at the very least, describe how habitat degradation can be minimized and then restored and how soil contamination can be minimized and then cleaned. The statement in the draft EIR/EIS that Section 7 Consultation will be initiated, does not address the identification and analysis of these types of impacts as required under NEPA and CEQA.

OTHER CONSIDERATIONS:

Loss of foraging habitat. Loss of 845 acres to quarrying activities would result in the loss of foraging habitat for bighorn. While the effects on foliage may “short term” due to reclamation efforts, the immediate effects on the endangered bighorn must be considered before patents are granted.

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Behavior of ewes during breeding season. Because the Shoveler Annex is within the “essential” habitat for bighorn ewes, the draft EIR/EIS must specifically analyze the effects of increased blasting, heavy equipment operation, crusher operation, increased train activity, change in available forage and loading activity on the behavior of ewes during breeding season.

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The effects of dust. The draft EIR/EIS must highlight how dust reduces photosynthetic activity, increases vegetation vulnerability to disease, insect damage, and predation, influences evapotranspiration, and impacts pollination, fruit and seed formation and production. Dust deposition and deposition of other particulates and mining in the wash bottom may affect quality and abundance of forage and shade. The effects of dust on perennial versus annual plants should be analyzed with regard to foraging habits and needs of the bighorn during different times of the year.

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The draft EIR/EIS must also determine how far dust travels in order to determine the full impact of dust on wildlife. The extent to which asbestos precipitates out in the dust is also of crucial importance to the toxicity of the proposal to wildlife. Moreover, the biological affect on humans and wildlife from inhaling and ingesting gypsum dust must be determined.

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Noise. The proposal involves extensive blasting that will result in increased noise, nitrogen and sulfur in the environment. A noise profile should be made for blasting, heavy equipment operations, crusher operations and railroad activity. Specific impact to wildlife in range of

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blasting should be analyzed in order to develop meaningful mitigation measures regarding when it is least harmful to conduct blasting in terms of the season or time of day.

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Con't.**

Other cumulative impacts. A 2004 study (Epps, et al., “Effects of Climate Change on Population Persistence of Desert-Dwelling Sheep in California” 18 Conservation Biology at 102, 103) shows that the bighorn sheep is particularly sensitive to global climate change and especially threatened by rapid changes in temperature and precipitation. Parameters related to climate, like elevation, precipitation, and the presence of dependable springs, were also shown to correlate with population persistence. The proposal will have a direct impact on the springs on which the bighorn depends and is likely to affect precipitation and climate.

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The proposed project is also likely to fragment or alter the bighorn’s movement. The 2004 study showed that populations inhabiting lower, drier mountain ranges were more likely to go extinct. If project impacts limit bighorn habitat to lower elevations, it would severely threaten the species entire existence. Proper analysis must be done to determine what effects the proposal will have on the bighorn’s climate and must consider the cumulative impact of climate change caused by existing conditions.

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b. Endangered Desert Pupfish

The draft EIR/EIS fails to properly identify and analyze potential impacts to the endangered desert pupfish found in the Fish Creek Wash, Anza Borrego State Park, San Sebastian Marsh and the San Felipe Creek. The proposed project wells are upstream of its critical habitat in the San Sebastian Marsh and San Felipe Creek. Critical habitat was designated for the pupfish along portions of San Felipe Creek, Carrizo Wash, and Fish Creek Wash, Imperial County, California. A thorough analysis of all impacts on the desert pupfish and its critical habitat in this area are particularly important because, as the US Geological Survey noted, “Today, the last remaining natural habitats of this species include San Sebastian Marsh and San Felipe Creek on the southwestern edge of the Salton Sea, and Salt Creek on the northern shore.” <http://wfrc.usgs.gov/research/aquatic%20ecology/STSaiki6.htm>

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The dessert pupfish reproduces in the designated reaches of San Felipe Creek, and Fish Creek Wash. These areas also provide adequate food and cover. Perhaps most importantly, these areas are isolated or at least partially isolated from predatory and competing exotic fishes. Because the desert pupfish is non-migratory, the areas it inhabits must fulfill all the requisites for its survival and successful reproduction. 50 Fed. Reg. 10842, 10848.

Both the San Felipe Creek and the Fish Creek Wash feed into the San Sebastian Marsh. The only known habitat in California where the desert pupfish make up a dominant part of the fish fauna is a short reach of San Felipe Creek and two small tributaries near San Sebastian Marsh. Proposals to remove of large volumes of ground-water from the aquifers that feed San Felipe Creek threaten to desiccate the marsh and destroy its habitat value for the pupfish. Development on the adjacent, privately owned lands could adversely affect desert pupfish habitat, particularly if there are significant surface disturbances. 50 Fed. Reg. 10847.

The project is proposed to take place directly in the region of the Carrizo Wash, another designated critical habitat of the pupfish. The draft EIR/EIS makes no mention of the Carrizo Wash's existence, its relation to the project, the specific effects on the wash and, specifically, how the desert pupfish would be impacted by the project's effects on the Carrizo Wash. As to the three wells for the Plan located in the Ocotillo/Coyote groundwater basin, Figures 3.3-1 and 3.3-3 show the extent of the tributary drainage and basin rivers but do not label them to clearly show how or whether Carrizo Wash is related to the existing wells. Carrizo Wash runs from the region of the Ocotillo/Coyote wells north into the San Felipe Creek and the "primary drainage in the Ocotillo Valley is the San Felipe Creek." (pg 308, 3.3.4.1). The Carrizo Wash is a part of the designated critical habitat of the desert pupfish. Together, these facts suggest that the increase water pumping for the proposed Plant operations may have direct impacts on the critical habitat of the pupfish as well as indirect and cumulative impacts.

**30-43
Con't.**

For the proposed Quarry Well 3 site the draft EIR/EIS fails to explain that the areas proposed for expanded mining, including 6 of the pending patent claims, are located directly within the ephemeral stream in a wash that merges with the Fish Creek Wash. The draft also fails to identify or analyze the direct, indirect, or cumulative impacts of these proposed changes in the surface hydrology may impact desert pupfish or its critical habitat. In addition, the draft EIR/EIS fails to analyze the potential cumulative impacts further downgradient on the designated critical habitat for the desert pupfish in San Sebastian Marsh and San Felipe Creek from the quarry, groundwater pumping for the quarry, groundwater pumping for the Plant, and farming activities, among others. The draft EIR/EIS fails to identify or analyze the direct, indirect, and cumulative impacts that these proposed changes would cause to the surface hydrology of the wash. The draft EIR/EIS also fails to analyze the potential cumulative impacts from pumping groundwater for the Quarry, pumping groundwater for the Plant, and from other farming activities and human uses down-gradient from the designated Critical Habitat.

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The draft EIR/EIS insists that pumping the new Quarry well and the new Plant wells will not cause enough drawdown to affect the springs that support the pupfish habitat (3.5 -34, 3.5-43), but this conclusion is not supported by the evidence provided. The Bookman-Edmonston study assumes that the only effect of the pumping would be a potential decrease in precipitation in the areas where all creek flow was diverted. The October 31, 2002 Memorandum asserts, "U.S. Gypsum plans on diverting all creek flows going through the project area, therefore the only impact the expansion may have on the area's hydrology would be surface flow caused by precipitation." This conclusion is illogical on its face and the study makes no attempt to support it with facts. Certainly, diverting all water flow through the entire 1,055 acres of the quarry will have far reaching effects on that area beyond mere precipitation. The draft's assertion that there would be no other impacts is purely erroneous and its subsequent failure to analyze the actual hydrologic impacts renders the EIR/EIS insufficient under CEQA.

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As to cumulative impacts, the draft EIR/EIS concludes that "any impacts that might occur on the Quarry site would be negligible by comparison with other watershed processes, and are not likely to have meaningful adverse impacts on the pupfish." (3.5-34). This conclusion is both unsupported and fundamentally misunderstands the CEQA requirement that cumulative impacts be considered. It is precisely the incremental impacts that must be considered under CEQA. Even where a proposed project would add only a small increment to an existing

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problem, the current project's effects may nonetheless be considered significant. Los Angeles Unified School District v. City of Los Angeles, 58 Cal.App.4th 1019, 1025-1026.

30-46
Con't.

As the FWS has found, groundwater pumping is an ongoing threat to the desert pupfish "The only known habitat in California in which the desert pupfish make up a dominant part of the fish fauna is a short reach of San Felipe Creek and two small tributaries near San Sebastian Marsh (Black 1980). However, the integrity of this habitat is threatened by proposals to convert the privately owned lands to irrigated agriculture. The removal of large volumes of ground-water from the aquifers that feed San Felipe Creek could cause the marsh to become desiccated and destroy its habitat value for pupfish." 51 Fed. Reg. 10847 (emphasis added). The CDFG reached the same conclusion, a "serious threat to the continued existence of the pupfish is the increasing human demand for water in the desert. Water pumped out of the ground depletes the same aquifers that supply water to pupfish habitats." "Pupfish in the Desert"; Atlas of the Biodiversity of California, CDFG at 68.

Assuming for the sake of argument that the direct and indirect impacts of groundwater pumping at the Quarry 3 site were comparatively small, even such supposedly incremental increases may have significant impacts to Critical Habitat when cumulative impacts are properly analyzed.

Furthermore the draft EIR/EIS fails to address impacts in relation to the goals of the Desert Pupfish Recovery Plan. The Recovery Plan is a crucial document guiding the protection and recovery of a species under the Endangered Species Act. Failure to assess threats and mitigation as it relates to the Recovery Plan is a fatal flaw because the Recovery Plan is the oversight agency's analysis of what is necessary to prevent the species from becoming extinct.

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Ultimately, the draft EIR/EIS makes an unsupported assumption that the proposal would have a negligible impact on the desert pupfish, makes no attempt to identify the extent of the proposal's impact and fails to list mitigation measures to prevent negative effects on the desert pupfish. Because the desert pupfish is an endangered species and the proposal will directly affect its habitat, failure to identify and resolve these issues renders the draft EIR/EIS incomplete.

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c. Desert Tortoise

The desert tortoise, *gopherus agassizii*, is protected under both the ESA and CESA. As a threatened species, the desert tortoise must be given specific consideration because the law not only requires that the species be protected from significant disturbances, but that it is actually aided in overall recovery. While the desert tortoise is known to be from the general region of the project site, draft EIR/EIS assumed that because the project is outside of its usual geographic range it would not require further consideration in the draft EIR/EIS. This conclusion is erroneous. The draft EIR/EIS openly states that the project site is 15 miles south of the desert tortoise's range west of the Salton Sea and 35 miles southwest of a designated Critical Habitat for the desert tortoise. (3.5-16). Therefore the project may have both indirect and cumulative impacts on the desert tortoise even if it has no direct impacts. Where the project has the potential to reduce the numbers or restrict the range of an endangered species, the impacts to such species

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represent a mandatory finding of significance. That the tortoise will not be impacted cannot be presumed and requires evidence to disprove this likelihood. Because the project may have indirect and cumulative impacts on desert tortoise habitat, the draft EIR/EIS's admitted failure to discuss these potential impacts is unsupportable.

**30-49
Con't.**

The draft EIR/EIS fails to consider any impacts to the desert tortoise. A proper EIS must address these impacts and should address impacts in relation to the goals of the Desert Tortoise Recovery Plan. The project will result in recognized threats to the desert tortoise including, but not limited to, increased traffic, pollution, alteration of food supply and potential habitat loss and fragmentation. These impacts must be recognized as significant. The cumulative impacts that threatened the desert tortoise, such as the destruction, degradation, and fragmentation of desert tortoise habitat resulting from increased traffic and decreased air quality must be considered along with the project's potential impacts. 59 Fed. Reg. 5820, 5823. Although known habitat is 15 miles away and a critical habitat 35 miles away, the indirect effects of dust, noise, changes in vegetation due to loss of water resources, and migration of other animals must be analyzed.

Desert Tortoises will develop a preference for certain plants, to which their digestive systems become accustomed. When forced to eat unfamiliar plants, their digestive tract require several months to become accustomed to them and to extract all available nutrients and water from them. Because they only have a few months in the spring to take in enough water to last them all year, destruction of their habitats and the plants in it can be fatal to the desert tortoise in the long run. Desert ecosystems require decades to recover from disturbances, and desert tortoise populations are incapable of rapid growth, even under optimum conditions. 59 Fed. Reg. 5820, 5824.

The draft EIR/EIS considers none of the potential threats posed by the project on this threatened species. Failure to identify all impacts to the desert tortoise and failure to propose mitigation measure renders the draft EIR/EIS unacceptable.

d. Barefoot Banded Gecko

The Barefoot Banded Gecko (also known as the magic gecko) is a threatened species under the California Endangered Species Act. Draft EIR/EIS correctly states that the gecko has a suitable habitat at the project site but understates the fact that the gecko's geographic range does, in fact, extend into the area. The revised 1998 map by the California Interagency Wildlife Task Group (CALIFORNIA INTERAGENCY WILDLIFE TASK GROUP. Database Version 8.1 (2005). R007 Barefoot Gecko www.dfg.ca.gov/whdab/cwhr/lha/lha_R007.pdf) shows that the yearlong range of the gecko extends into the actual area of the project water supply as shown in the draft EIR/EIS Figure 1.0-1.

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When determining the impact and mitigation measures, the USG must consider the hydrologic effects of pumping water directly in the gecko's habitat. As noted in the above discussion of the pupfish, the draft EIR/EIS's assumption that drilling and diverting water through the project area will only affect precipitation is unfounded. Displacing all water from a water source will have major direct effects on the land around that source and the wildlife on that

land. As a threatened species, the significant impacts of these effects are mandatory specifically for the gecko.

**30-50
Con't.**

The draft EIR/EIS fails to analyze the potential impacts of the project on the gecko, but, nonetheless, states a mitigation solution for the unconsidered impacts. The proposed solution is to conduct surveys to determine whether the species is present or absent from any new disturbance areas. (Mitigation Measure 3.5-1e). The draft EIR/EIS glosses over the necessary order of a proper environmental assessment. The apparent solution is actually the preliminary method required to assess the impact of the project. A mitigation solution cannot be proposed until the impact has been assessed. The impact and the attendant mitigation measures must be determined before the draft EIR/EIS is accepted. Thus, this draft EIR/EIS fails to both state the actual impacts to the gecko and fails to propose a real mitigation solution.

2. Special Status Species.

a. The Flat-tailed horned lizard (FTHL)

The draft EIR/EIS fails to properly identify and analyze potential impacts to the FTHL which is protected under the Rangewide Management Strategy and is proposed to be listed under the ESA. 70 Fed. Reg. 72776. Both the proposed listing and the Rangewide Management Strategy provide legal protection of the FTHL. The Rangewide Management Strategy established FTHL management areas while the FTHL was monitored for listing as a threatened species by the USFWS. The draft EIR/EIS fails to clearly state that the West Mesa FTHL Management Area and the Yuha Dessert FTHL Management Area will be affected by the proposal and fails to analyze the extent to which these Management Areas will be impacted.

As the FTHL is a species proposed for listing under the ESA, BLM is required to seek a is required to confer with the Fish & Wildlife Service regarding the impacts of the proposed project on the species. ESA § 7(a)(4), 16 U.S.C. § 1536(a)(4). before approval of the draft EIR/EIS. At minimum, the impacts from the portion of railroad ROW that goes through the West Mesa FTHL management area, will directly impact the species. Moreover, much of the area affected by the proposed project provides habitat for the FTHL and may be considered for designation by FWS as a Critical Habitat.

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Also, as a special status species, the FTHL qualifies for heightened scrutiny under CEQA. Mandatory findings of significance are required because the proposal has the potential to reduce its habitat, reduce its numbers and restrict its range of movement. Thus, where the draft EIR/EIS states that a suitable FTHL habitat may occur at the Plant site, (3.5-25), USG has a duty to specifically investigate and report on the significance of the proposed plant activity on the FTHL. Instead, the draft simply states that because most of the site is already highly disturbed it is unlikely that FTHL will inhabit the site. (3.5-25). While proving that the plant already has an impact on the FTHL, the draft EIR/EIS simultaneously glosses over the need to establish the degree of the existing impact as well as the need to establish the potential impact of expanding the disturbance an additional 36 acres.

Mandatory findings of significance should also be found for FTHL habitats along the route of the proposed waterlines because “FTHL are absent from the Plant site and water line route due largely to the existing disturbance.” (3.5-30). Again, the impact of increasing the disturbance must be analyzed. In fact, all habitats of the FTHL, whether *occupied* as in the Sandy habitat along the western 2.5 miles of the water line alignment (3.5-39), or *suitable* as in the places along the railroad ROW, Plaster City water line, and the alluvial deposits on the west side of the drainage above the wash channels should be assessed for both existing and future potential impacts.

The draft EIR/EIS acknowledges that there have been several sightings near the railroad alignment as it traverses the West Mesa MA and that the FTHL have been observed to bask on the rail lines. Section 3.5-53 merely states, “Expanded operations of the existing narrow-gauge rail line could cause increased mortality to FTHL (though the likelihood of this is unknown) and ongoing maintenance may have an adverse impact on their populations or habitat.” Given these facts, increased mortality resulting from increased railroad activity is an absolute certainty absent special facts. The draft makes no mention of how the FTHL’s mortality would not be increased by the proposal and thus is responsible for finding precisely to what degree the FTHL mortality would increase. Moreover, other potential impacts on the FTHL from increased rail activity must be determined.

As a special status species, any proposal that threatens to decrease numbers of the FTHL is required to make detailed findings on the feasibility of alternatives and mitigation measures to reduce or avoid the significant effects and, when feasible, to make changes in the project to lessen the adverse environmental impacts. Here, the only mitigation measure offered by the draft EIR/EIS is compliance with the FTHL Rangewide Management Strategy (Mitigation Measure 3.5-2). This so-called mitigation measure is insufficient because it fails to describe how a proposal that is certain to increase mortality of a special status species can be in compliance with the Rangewide Management Strategy, which is designed to protect and increase populations of the FTHL.

Other mandatory findings must be made for impacts due to construction of the 10” replacement pipe. Figure 3.5-1 shows historic and recent sightings of FTHL in the vicinity of the Plant site. Because FTHL exist in the area and could cross the pipeline route, construction of 10” replacement pipeline would affect FTHL. Specific impact and mitigation studies for this part of the proposal are mandatory but absent in the draft EIR/EIS.

The Quarry No. 3 well and associated pipeline will require excavation and construction that will affect FTHL which have been directly observed basking on the rails of the narrow-gauge line. (3.5-46). The draft EIR/EIS dismisses the impact of the excavation and construction based on the fact that that activity will be temporary. Though construction will be temporary, it will have a direct effect on the population that should have a long-term impact on a sensitive species like that FTHL. This temporary disturbance must be specifically mitigated to avoid any adverse impact on this protected species. The stated mitigation measure (Mitigation Measure 3.5-2) is insufficient because it merely restates that Standard Mitigation Measures for constructing Quarry Well #3 and the Quarry pipeline will be applied. There is no mention as to how or to what extent these standard measures will decrease adverse impacts on the FTHL.

Furthermore, the claims that the increase disturbance will only be temporary because subsequent activity at the line would not increase do not make sense. Even if the activity at the site post-construction will only be intermittent maintenance that would normally be necessary for the current rail, the 89.5% increase in rail activity should logically result in an increase need for maintenance.

**30-51
Con't.**

In any case, the 89.5% increase in railroad activity will, in itself, effect the FTHL population due to increased noise, air pollution, and startle effects. The reaction of the FTHL to oncoming trains was not determined. The draft EIR/EIS merely assumed that FTHL would sense the oncoming trains and avoid getting run over by leaving the tracks. Mere hope that the FTHL would not be hit by trains does not amount to proof. Moreover, the possibility that the FTHL would sense and respond to train activity must be assessed to find how this impacts the overall behavior of the FTHL. Increased railroad activity is likely to either kill FTHL or fragment FTHL habitat or both. Reasons why this would not occur must be presented and mitigation measures established.

b. Chuckwalla

The chuckwalla was observed at the quarry site in both 2002 and 1995 surveys. The chuckwalla is considered a “special animal” under the CDF, meaning that the California Department of Forestry has a special interest in tracking the animal. Because the chuckwalla is known to be at the quarry, the project will have direct impacts on it unless some other factors apply. In the absence of any specific explanation as to why the chuckwalla will not be impacted, the extent of the potential impact must be analyzed.

The draft EIR/EIS fails to state any impacts to the chuckwalla and fails to determine a mitigation solution for such impacts. The draft EIR/EIS attempts to minimize its duty to analyze all real environmental impacts by stating that the current California Natural Diversity Database (CNDDDB) ranking indicates that the chuckwalla is “apparently, secure” in California. (3.5-15). The CNDDDB is a computerized inventory of data on the general condition and location of California’s rare, threatened and endangered animals. Regardless of the CNDDDB’s designation, the fact that the chuckwalla is listed on the CNDDDB shows that the chuckwalla is a rare animal and thus requires mandatory significant findings. “Apparently secure” is not determinative and does not excuse the USG from making the required findings for a rare species. The draft EIR/EIS fails to analyze impacts and provide mitigation solutions regarding this special animal and is thereby, incomplete.

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c. American Badger

The American badger is likely to occur on the quarry site at least occasionally. No impact analysis or mitigation measures were included in the draft EIR/EIS. As a listed species of special concern by the CDFG, findings of significance from the disruption of the American badger’s habitat are mandatory regardless of whether the animal was observed during surveys.

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d. Colorado Valley Woodrat

The Colorado Valley Woodrat, *Neotoma albigula venusta*, is a species of special concern by CDFG whose range extends into the area of the proposed project. Because the woodrat's habitat will be certainly affected by the project, all impacts must be assessed and mitigation measures determined. No impact analysis or mitigation measures were included in the draft EIR/EIS

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e. Carlson's dune beetle, Hardy's dune beetle, Andrew's dune scarab beetle

These dune invertebrates are listed by the BLM as species of management concern, which means they are rare species with persistent concerns and/or species that impact BLM objectives. These beetles have suitable habitat along the USG railroad alignment and the draft acknowledges a "low probability that they may occur there" (3.5-17). Because the project will directly impact these species and/or their potential habitats, findings of significance are mandatory. The draft EIR/EIS says nothing about the potential impacts and simply attempts to resolve its omission by stating that the probability of occurrence is low. As a species of special management concern, it is essential that actual impact analysis and mitigation measures be performed because impacts to potential habitats of rare species are significant to those species. The failure of the draft EIR/EIS to identify impacts and mitigation measures renders the draft EIR/EIS deficient.

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f. Special Status Bats

The pallid bat (*Antrozous pallidus*), California mastiff bat (*Eumops perotis californicus*), California leaf-nosed bat (*macrotus californicus*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), spotted bat (*Euderma maculatum*), and Townsend's big-eared bat (*Plecotus townsendii pallescens*) are likely to forage over the site and some are likely to roost or breed on-site. No impact analysis or mitigation measures were included in the draft EIR/EIS. Because all these species are regarded as species of special concern by the CDFG and their habitats will be certainly affected by the project, all impacts must be assessed and mitigation measures determined.

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g. Black-tailed gnatcatcher

The Black-tailed gnatcatcher, *Polioptila melanura*, is a special status bird that was observed on-site during the 2002 field surveys. The Black-tailed gnatcatcher is on the CDFG's list of Special Animals. They are year round residents of the site. As a special status bird, CEQA 15065 requires a mandatory finding of significance for the direct impacts caused by the actions proposed in their habitat. The draft EIR/EIS fails to provide any impact analysis or mitigation measures, as if stating that the BTG's status as "apparently secure" under the CDFG (3.5-17) relieved them of this duty. As noted above, any listing under the CDFG is proof enough that the species is rare and within the specific requirements of CEQA 15065.

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Cumulative impacts should be considered when assessing the impact of the proposal on the BTG. Destruction of the mesquite brushland in the Coachella, Imperial and Colorado River valleys is the main factor causing the decline of the Black-tailed Gnatcatcher in California. The

effects of the dust, changes in the area hydrology, and other pollutants must be analyzed in order to determine how plant-life essential to the BTG's survival will be impacted. Irrigated agriculture has introduced salt cedar into the areas of scrub that would otherwise be preferred nesting and foraging areas for the BTG. The diversion of water through the project area may have similar effects on plantlife in the area and may result in increased invasive species spread. The effects of invasive species spread will reach far beyond the areas of direct disturbance and must be considered. (Tinant, J. 2006. Black-tailed Gnatcatcher (*Polioptila melanura*). In The Draft Desert Bird Conservation Plan: a strategy for reversing the decline of desert-associated birds in California. California Partners in Flight.)

**30-57
Con't.**

Off-road vehicle use in desert washes may also contribute to population declines. Cumulative analysis must be conducted and should consider the fact that the "Plaster city open area" for off-highway vehicles borders the eastern 5 miles of the pipeline alignment.

h. Loggerhead shrike

The draft EIR/EIS acknowledges the Loggerhead shrike *Lanius ludovicianus* as a species of special concern that was directly observed on the project site during 2002 surveys, yet fails to analyze impacts and develop mitigation solutions for the shrike. When properly assessing impact, the USG should consider the effects of dust, pollution and hydrology on the area vegetation. A potentially important impact is alteration of desert habitats through invasion by nonnative plants, especially exotic grasses (Rundel and Gibson, 1996; pp. 312-314). The West Mojave Plan recognizes that "[c]hanges in human land-use practices, the spraying of biocides, and competition with species that are more tolerant of human-induced changes appear to be major factors contributing to [its] decline." (Campbell, K. West Mojave Plan, Species Account-Loggerhead shrike (*Lanius ludovicianus*); Yosef 1996.) Predation by feral cats introduced by humans, and collisions with vehicles and other man made objects are also threats to the species and must be considered in cumulative impact analysis. Id.

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The project will result in impacts that are recognized as threats to the Loggerhead shrike including, but not limited to, changes in human land-use practices, collisions with vehicles and other man made structures, and elimination of native habitat. The project will clearly reduce the number, through direct mortality and habitat destruction, and restrict the range, through habitat modification and fragmentation, of a rare species per CEQA Guidelines § 15065. This impact must be addressed and mitigation solutions determined.

i. Burrowing Owl

The quarry site provides potential habitat for burrowing owls to breed on-site. This species is recognized by the State of California as a species of special concern and as a sensitive species by the BLM. Over 71 percent of California's breeding owls currently live in the margins of the agricultural land in the Imperial Valley, primarily nesting burrows in earthen irrigation channels.

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The draft EIR/EIS states that burrows are scarce at the quarry site (3.5-18), thereby showing how the quarry site is in fact a potential breeding site for the owl. All potential habitats and particularly potential breeding sites must be considered in an impact report for a sensitive species of special concern. The draft EIR/EIS fails to identify any impacts or provide any mitigation solutions.

**30-59
Con't.**

Threats to the species include habit degradation, disturbance to nesting and roosting sites, pesticides and other contaminants/toxins. The project is likely to threaten the owl in each of these ways. Agricultural practices also reduce the available nesting and roosting sites for the burrowing owl. Burrowing owls are vanishing throughout California as they are being forcibly evicted from their burrows and their grassland habitat is being bulldozed to make way for urban sprawl. Widespread poisoning of ground squirrels also deprives owls of suitable nest burrows. The threats created by the project must all be considered along with other existing threats in a cumulative impact analysis.

j. Le Conte's Thrasher

The Le Conte Thrasher, *Toxostoma lecontei*, occurs on the site and has a suitable nesting habitat on the site. The LCT is recognized by the State of California as a species of special concern and as a sensitive species by the BLM. The draft EIR/EIS downplays the significance of these facts by simply stating that the project site presents "no special habitat components not widely available throughout the region". (3.5-18). Such a statement is inaccurate because any habitat of a sensitive species of special concern has special significance to that species. The draft EIR/EIS provides no impact or mitigation analysis even though it is clearly required in for the LCT.

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Human disturbance is the primary threat to the species. Off-road vehicle activity particularly disrupts the species by crushing vegetation and destroying the underlying litter and soil surface of LCT habitat. Mitigation measures during construction and implementation of the proposal should consider these types of impacts in addition to the cumulative impacts of other human disturbances and off-road vehicle activity. The cumulative effects of the pipe construction and the "Plaster city open area" for off-highway vehicles that borders the eastern 5 mile of the pipeline alignment should be assessed with regard to the LCT.

k. Special Status Raptors

The proposal site is located in an area where several special species raptors are likely forage, particularly during winter or migration seasons. These include the golden eagle (*Aquila chrysaetos*), Cooper's hawk (*Accipiter cooperii*), merlin falcon (*Falco columbaris*), and prairie falcon (*Falco mexicanus*). Moreover, the golden eagle, ferruginous hawk, and merlin are also considered sensitive during winter. The draft EIR/EIS neglects to state that the golden eagle is specifically protected under the Bald and Golden Eagle Protection Act. As special species and/or protected species, all of these birds require impact and mitigation analysis. The draft EIR/EIS lacks the required findings for all these species.

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l. Mitigation measures for birds are inadequate.

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The draft EIR/EIS's sole mitigation effort with regard to the birds impacted by the plan only refers to the Migratory Bird Treaty Act and the California Fish and Game Code. The fact that the golden eagle is fully protected under the BGEPA, which contains different and more restrictive provisions than the MBTA, is ignored completely.

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Con't.

Most strikingly, Mitigation Measure 3.5-1c is not a mitigation solution, but is instead a proposal to do the surveying necessary to for a proper impact analysis. MM 3.5-1c simply proposes to "survey the area prior to grading and brush removal of previously undisturbed habitat." Survey the area for what? The fact that surveys necessary to determine the potentially fatal impacts on birds have not yet been performed is proof that the impact analysis is inadequate. Moreover, in the event that the survey produces positive results, no mitigation measures are proposed. These issues should have been determined before the draft EIR/EIS was submitted because until the actual impacts have been assessed and alternatives presented, the environmental impact of the project cannot be determined.

m. Native Plants and Vegetation Communities.

The draft EIR/EIS is also wholly inadequate as it relates to impacts to native plant species. First, it fails to properly identify the status of these plants and where they are found relative to the project site. Next, it fails to provide any meaningful analysis of potential impacts to these plants. Although the draft EIR/EIS states that some surveys were conducted those surveys appear to be quite late in the season for identification of annuals. Moreover, such brief surveys over such a large area done in such a short period of time are inevitably inadequate. It is simply not possible to have conduct adequate surveys for the number and variety of species concerned over such an extensive area in the time frame stated particularly where the identification of many of these species is quite difficult even under the best conditions. Although protocol surveys are not strictly required, adequate surveys are. Because the agencies failed to undertake surveys during the appropriate time of year for identification of many of these species, the agencies should assume presence of annuals known to occur in the area and require mitigation for any potential impacts such as conservation of lands where the species are found to occur at a 5:1 ratio.

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In general, the draft EIR/EIS minimizes the impacts to the endangered, threatened, and sensitive species that will be impacted by the project. Having done so, the draft EIR/EIS then fails to propose adequate avoidance or mitigation measures.

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F. The Draft EIR/EIS fails to properly identify, analyze and avoid or mitigate impacts to air quality.

A number of impacts to air quality would result from this project, both directly from the project's operations and indirectly, contributing to increased risk to human health and continued ongoing violations of the Clean Air Act. NEPA/CEQA requires that those impacts are properly identified and analyzed and that the EIR/EIS includes a thorough discussion of alternatives and mitigation measures. Pub. Res. Code §21100; C.C.R. §15362; 42 U.S.C. § 4332. The fact that

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other agencies have regulatory control over some aspects of air pollution pursuant to other statutes in no way lessens the County's or BLM's responsibility to fully disclose, analyze, avoid, minimize, and mitigate all air quality impacts of the proposed project. The past failure of many agencies to do so has been a major contributing factor to Southern California's current air quality crisis.

In the short term, the project would have an adverse effect on human health and the environment. Increased dust production and increased emissions from automobiles, trucks, and mining equipment would create significant and adverse impacts. In the long term, these operational activities contribute a great deal to the environmental decline of the atmosphere. Polluted air causes short and long term health problems for people, and affects the environment locally, regionally and globally. Air pollution in general causes a litany of problems, from poor visibility to health problems to nitrogen deposition (which adversely impacts native vegetation, tends to increase the spread of non-native vegetation, and thereby increases fire hazards). NEPA/CEQA requires that the EIR/EIS include full analyses of both short term and long term impacts to human health and the environment. The draft EIR/EIS fails to adequately discuss the cumulative impacts from increased dust production, impacts to air quality in the context of an already polluted atmosphere, and long term impacts from activities which would degrade local air quality over the span of 80-plus years (stated as the length of time excavation activities would be occurring).

The project location is within the Colorado Desert in Imperial County. Characterized by very hot summer temperatures, relatively strong seasonal winds, low humidity and low precipitation, the project location is highly vulnerable to poor air quality and poor visibility due to an excess of particulate matter (PM) released by the expansion of this project. PM10 creates health problems such as respiratory ailments and scatters light which can reduce visibility. The draft EIR/EIS claims that though there will be an overall significant increase in the amount of fugitive dust and PM10 released due to the project, mitigation measures will compensate for most of that increase. DEIS/DEIR at 3.6-26-3.6-28; Table 3.6-7. However, the net increase is still significant if the project is viewed in the context of an already polluted air basin. And though the Draft EIR/EIS claims that most of the dust will settle onsite and will not affect offsite areas, the pattern of high seasonal winds might change that conclusion. Draft EIR/EIS at 3.6-26. Though the Draft EIR/EIS uses "meteorological data" and data from USG, it arrives at a conclusion without full discussion of how the natural climate and topography of the Colorado Desert might amplify the impacts from this project. Draft EIR/EIS at 3.6-26. Specifically, the discussion of cumulative impacts to air quality concludes that none of the increases of air pollution caused by the project will exceed CEQA thresholds. However, the draft EIR/EIS concludes that CO emissions will exceed CEQA thresholds by a great deal, but will not cause or contribute to any emissions violations of federal or state standards based on modeling. Draft EIR/EIS at 3.6-45. While the draft EIR/EIS provides the results from the CO modeling, it fails to explain the results in a way which would give some significance to the numbers and figures provided. Without such an explanation, the analysis is conclusory and inadequate.

Although the Draft EIR/EIS recognizes that the proposed project will have significant, negative impacts, it underestimates the scope of those negative impacts, and does little to mitigate or avoid them. In discussing the air quality impacts, the Draft EIR/EIS only goes so far

as to conclude that projected emissions from the proposed project might contribute to exceeding air quality thresholds. That is a reasonable start, but falls far short of a complete discussion of the impacts. Air quality violations should be taken seriously, as Imperial County (within the Salton Sea Air Basin) is in a state of federal (CAA) and state (CCAA) non-attainment for PM10 and ozone. While the Draft EIR/EIS downplays its contribution to this problem, it neglects to analyze its operation in the context of an already polluted atmosphere. Particulate matter (PM10) is especially problematic. And though the draft EIR/EIS states that the project will result in a beneficial decrease of PM10, it can claim so only because of the implementation of control measures which have environmental consequences as well. The proposed dust suppression methods consist mainly of drilling a new well, building a water pipeline and paving roads which will be used by the quarry equipment for transportation. While these might lessen some of the impacts from the increased dust production, the draft EIR/EIS is required to analyze the impacts to the environment from the implementation of those measures. The draft EIR/EIS is also required to analyze the impacts from the increased dust production in the event that the control measures are not implemented. Its failure to do so is an inexcusable assumption that these measures are generally beneficial.

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Stationary source potentials to emit will also increase with regards to Carbon Monoxide (CO), Sulfur Oxides (SOx), and Volatile Organic Compounds (VOC). There is little to no discussion of these impacts in the draft EIR/EIS, as the document provides bare projected emission numbers without a thorough explanation of their impacts.

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The Draft EIR/EIS states that the excavation operations are scheduled to extend for approximately 80 years. Draft EIR/EIS at 3.6-20. However, the document fails to properly and thoroughly analyze the long term impacts of the project over the span of 80 years. While the Draft EIR/EIS provides information about per year emissions, it does not view its contribution to the air quality problem in the context of the long term operations of the project, as NEPA/CEQA requires.

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Additionally, the proposed mitigation measures are inadequate. Specifically, most of the mitigation measures included in the draft EIR/EIS simply reference compliance measures (mandated by existing law). While already required to comply with the law, these measures do not alleviate any additional impacts from the project. This project consists of a mining operation expansion, building pipelines, grading, trenching, pumping water, transporting natural gas, and many other potentially significant activities. A Draft EIR/EIS for a project of this character should include measures which will seek to avoid impacts from the project in addition to complying with the law. Also, the mitigation measures are inadequate to fully compensate for the impacts of the excavation operations over the span of 80 years. Compliance measures are insufficient when mitigating for activities which would be worsening air quality for such a long time period.

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G. The draft EIR/EIS fails to properly identify, analyze and avoid or mitigate impacts to visual resources.

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Visual impacts to the project area surrounding vicinities would result from the project's operations. The Anza-Borrego State Park is adjacent to the project site. Although the draft

EIR/EIS states that the project will have no impact on the visual resources of that neighboring State Park, it is our understanding that the project will be visible from the State Park, and may significantly degrade the quality of that public resource. Impacts to the aesthetic integrity of the environment should have been fully analyzed the draft EIR/EIS and the failure to include this information renders the EIR inadequate under CEQA.

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H. The draft EIR/EIS fails to properly identify, analyze and avoid or mitigate growth inducing impacts of the project.

CEQA requires that an EIR must describe any growth inducing impacts of the project and the ways in which it could foster growth. Pub. Res. Code §21100(b)(5); CEQA Guidelines § 15126(d), CEQA Guidelines § 15126.2(d). Even if the growth inducing impacts are indirect, they must be discussed. See Napa Citizens for Honest Government v. Napa County, 91 Cal. App. 4th 342, 368 (2001).

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The draft EIR/EIS fails to adequately identify and analyze the project's growth inducing impacts as part of the indirect impacts of the project. See 40 C.F.R. §1508.8 ("Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.")

I. The draft EIR/EIS fails to properly identify, analyze and avoid or mitigate impacts to global climate change.

The impacts to air quality, biological resources and water resources are more far-reaching and much more dangerous than the draft EIR/EIS suggests. Global climate change used to be a fear that would not be realized until the future. Currently, we are witness to physical changes in the Earth as a result of human-induced global climate change. This fact is no longer subject to credible debate. In 2001, the Intergovernmental Panel on Climate Change ("IPCC") concluded that over the next century, average global temperatures will rise between 2.5 and 10.5 degrees Fahrenheit.⁶ Dr. Rajenda Pachauri, chairman of the IPCC, has stated that the world has "already reached the level of dangerous concentrations of carbon dioxide in the atmosphere," and that "[w]e are risking the ability of the human race to survive."⁷ Tangible evidence that the world is getting warmer can be found in the Arctic, where the sea ice has been declining (melting and not re-freezing) a staggering 9% per decade. Polar bears and other Arctic species are dwindling as their habitat literally melts from under them. Even under conservative estimates, scientists say Arctic winter temperatures could rise as much as eighteen degrees Fahrenheit, eliminating year-round ice completely by the end of the century. And in addition to the Arctic, other environments and habitats will be altered by global climate change. See generally, Epps, et al. 2004 at 2.

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⁶ IPCC, *Climate Change 2001: The Scientific Basis*. Cambridge University Press.

⁷ *Global Warming Approaching Point of No Return, Warns Leading Climate Expert*, The Independent, January 23, 2005.

These potential impacts from global climate change will affect water resources, air quality, wildlife and vegetation. See generally, Epps, et al. 2004 (discussing the far-reaching impacts of global climate change). The proposed project will do nothing to improve local, regional or global air quality, and everything to further degrade them all. The draft EIR/EIS must address and analyze these impacts in the long term context of their contribution to global climate change. Furthermore, the draft EIR/EIS must explore mitigation measures that will lessen or avoid these impacts, and adopt such measures that are feasible. The draft EIR/EIS should include requiring that alternative energy sources be integrated into the proposed project as opposed to mentioning them as an afterthought (where the draft EIR/EIS discusses potential energy usage in the event that solar panels are not used). The magnitude of global climate change cannot be underestimated and should be taken into consideration when an action would contribute to that problem.

J. The draft EIR/EIS fails to properly identify, analyze and avoid or mitigate cumulative impacts of the project on environmental resources.

Both NEPA and CEQA require detailed cumulative impacts analysis. See 40 C.F.R. §1508.7; §1508.25 (NEPA requires that the discussion of potential significant impacts include analyses of cumulative impacts); see also C.C.R. §15130 (CEQA Guidelines), Klamath-Siskiyou Wildlands v. BLM, 387 F3d 989, 996-97 (2004). These cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 C.F.R. § 1508. CEQA also requires that an EIR include a list of past, present, and probable future projects producing related or cumulative impacts, or a summary of projections from adopted planning documents regarding regional or area wide conditions contributing to cumulative impacts. CEQA Guidelines § 15130. CEQA then requires a “reasonable analysis of the cumulative impacts of the relevant projects” and to “examine reasonable, feasible options for mitigating or avoiding the project’s contribution to and significant cumulative effect.” Id. The Draft EIR/EIS fails on all counts by neglecting to properly analyze the impact that this project would have over the lifetime of the excavation activities, combined with existing local environmental issues and in the context of an already polluted atmosphere

A meaningful cumulative impacts analysis is particularly important because cumulative impacts are synergistic and the analysis should assess “cumulative damage as a whole greater than the sum of its parts.” Environmental Protection Information Center v. Johnson 170 Cal. App. 3d 604 (1985). Unfortunately, the Draft EIR/EIS makes the fundamental mistake of assuming that incremental impacts need not be taken seriously in a cumulative impacts analysis under NEPA/CEQA—this faulty logic has been repeatedly rejected by the courts. Kleppe v. Sierra Club, 427 U.S. 390, 410 (1976); Kings County Farm Bureau v. City of Hanford (1990) 221 Cal. App. 3d 692 , 720-21

“One of the most important environmental lessons evident from past experience is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant, assuming threatening dimensions only when considered in light of the other sources with which they interact. . . .” See Kings County. The court found that “the analysis used in the EIR . . . avoids analyzing the severity of

the problem and allows the approval of projects which, when taken in isolation, appear insignificant, but when viewed together, appear startling. Under [the proffered] ‘ratio’ theory, the greater the over-all problem, the less significance a project has in a cumulative impacts analysis. We conclude the standard for a cumulative impacts analysis is defined by the use of the term “collectively significant” in Guidelines section 15355 and the analysis must assess the collective or combined effect The EIR improperly focused upon the individual project’s relative effects and omitted facts relevant to an analysis of the collective effect this and other sources will have” Kings County Farm Bureau v. City of Hanford (1990) 221 Cal. App. 3d 692 , 720-21. Such is the case here, as detailed below the draft EIR/EIS improperly focused on the relative effects rather than the cumulative effects. An adequate cumulative impacts analysis would show that the proposed project will have startling and significant cumulative impacts on, among other things, water resources, air quality, and biological resources in the project area.

As in so many other sections of the draft EIR/EIS there was no attempt at meaningful analysis of cumulative impacts to water quality. The draft EIR/EIS concludes, without justification or analysis, that the cumulative impacts on riparian habitat, aquatic habitat, and aquatic species would be less than significant. This conclusory analysis violates NEPA/CEQA. See Coalition for Canyon Preservation, 632 F.2d at 782, n. 3 (9th Cir 1980); Sierra Club v. U.S. Dept. of Agriculture, 1997 WL 295308, *12 at n.8; see also CEQA Guidelines § 15130(a) (A lead agency “shall briefly describe its basis for concluding that the incremental effects is not cumulatively considerable”). Courts have upheld this standard to find that where an EIR concludes that cumulative impacts are not significant, it should explain the basis for that conclusion. See Citizens to Preserve the Ojai v. County of Ventura, 176 Cal. App. 3d 421, 432. Even incremental increases to existing problems can be significant and must be analyzed. Where a current project would add only a small increment to an existing problem, the current project’s effects may nonetheless be considered significant. Los Angeles Unified School District v. City of Los Angeles, 58 Cal.App.4th 1019, 1025-1026.

K. The draft EIR/EIS fails to properly identify and analyze unavoidable significant impacts of the proposed project.

A draft EIR must describe those significant adverse environmental impacts that cannot be avoided because there are not feasible mitigation measures or because feasible mitigation measures cannot mitigate the impacts to a less than significant level. CEQA Guidelines §§ 15126(b); 15126.2(b). If the lead agency nevertheless decides not to require such design changes, then the EIR must describe the “implications” of impacts involved and the agency’s reasons for choosing to tolerate them rather than requiring an alternative design.” CEQA Guidelines §15126.2(b); Pub. Resources Code § 21100(b)(2)(A). These issues must be addressed in an EIR section that also addresses significant effects “that would be irreversible if the project is implemented.” Pub. Resources Code § 21100(b)(2).

The Draft EIR/EIS does not discuss any unavoidable significant impacts but only briefly mentions, without any analysis, the irreversible and irretrievable commitment of

five resources: energy and materials; geology and minerals; water resources; vegetation; and air quality. See Draft EIR/EIS at 4.0-3 to 4.0-3. Indeed, the proposed project if adopted will have numerous significant unavoidable impacts to these resources as well as to biological resources and others. The Draft EIR/EIS's failure to adequately identify all such impacts and its omission of the required analysis of unavoidable significant impacts makes it deficient.

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III. The Draft EIR/EIS Should Be Recirculated for Public Review and Comment.

A lead agency must recirculate an EIR for further public comment under any of four circumstances:

- (1) When the new information shows a new, substantial environmental impact resulting either from the project or from a mitigation measure;
- (2) When the new information shows a substantial increase in the severity of an environmental impact, except that recirculation would not be required if mitigation that reduces the impact to insignificance is adopted;
- (3) When the new information shows a feasible alternative or mitigation measure that clearly would lessen the environmental impacts of a project and the project proponent declines to adopt the mitigation measure; or
- (4) When the draft EIR was "so fundamentally and basically inadequate and conclusory in nature" that public comment on the draft EIR was essentially meaningless.

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Guidelines §15088.5.

Based on the comments above and attached, it is clear that the EIR/EIS must be re-drafted and recirculated. All of the conditions above will be met by meaningful and adequate discussion of the project description, alternatives, impacts, mitigation measures, and cumulative impacts. Thus, the County and BLM must revise the draft EIR/EIS and recirculate that revised document for public comment.

IV. The proposed project will violate Federal Mining law

A. BLM's Failure to Properly Apply its Regulatory Authority over US Gypsum's Mining Operations.

Throughout the EIR/EIS, the BLM fails to properly apply its full regulatory authority over the Mining Operations on federal public lands. For instance, the agency appears to assume locatability and validity for any and all unpatented mining or millsite claims proposed for use by US Gypsum. The agency fails to take account of the substantial issues related to claim validity raised in the Patent Protest filed with the BLM by the Sierra Club and Center for Biological Diversity.

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As recently confirmed by the Interior Department:

First of all, the mere filing of a plan of operations by a holder of a mining claim invests no rights in the claimant to have any plan of operations approved. Rights to mine under the general mining laws are derivative of a discovery of a valuable mineral deposit and, absent such a discovery, denial of a plan of operations is entirely appropriate. This, in fact, was the express holding in Southwest Resource Council, 96 IBLA 105, 123-23 (sic.), 94 I.D. 56, 67 (1987). See also Robert L. Mendenhall, 127 IBLA 73 (1993); Southern Utah Wilderness Alliance, 125 IBLA 175, 188-89, 100 I.D. 15, 22 (1993).

...

Claim validity is determined by the ability of the claimant to show a profit can be made after accounting for the costs of compliance with all applicable laws, and, where a claimant is unable to do so, BLM must, indeed, reject the plan of operations and take affirmative steps to invalidate the claim by filing a mining contest.

Great Basin Mine Watch, 146 IBLA 248, 256 (1998) (emphasis in original).

The BLM in this case developed its purpose and need for the project based on its impermissible assumption that the filing of unpatented mining claims by US Gypsum under the Mining Law prohibits the agency from denying any part of the proposed operation. US Gypsum's "right" to mine, to the extent it exists at all, extends only to those lands covered by a valid claim. Off of valid mining claims, the BLM has a much higher level of discretion when considering activities proposed for such lands.

Apparently relying on this impermissible and unreasonable constraint, the BLM failed defined the purpose and need for the project unreasonably narrowly and failed to consider the proper no action alternative. By imposing this constraint and the resulting unreasonable purpose and need on its entire decisionmaking process, the BLM has created an obligation to approve all aspects of the proposed action where none exists.

It is precisely for situations such as this one that the courts have articulated a rule that a statement of purpose and need cannot be unreasonably narrow. Were it not for this requirement, the BLM always would be free to define arbitrarily, as the agency has done here, a narrow purpose and avoid NEPA's requirement to consider reasonable alternatives to the proposed action.

The BLM appears to have improperly processed the entire quarry disturbance proposal under the auspices of the 1872 Mining Law and the 43 CFR Part 3809 regulations, when in fact, only the activities proposed on valid claims themselves are arguably entitled to the statutory protections identified by the agency. Any activity that is not proposed for valid claims should be reviewed and approved/disapproved under the BLM's discretionary authority under FLPMA, and its implementing regulations (i.e. 43 CFR Part 2920).

The failure of the BLM to properly apply its discretionary authority also improperly biased its alternatives review under NEPA. In this case, the BLM prepared the EIR/EIS based on the assumption that US Gypsum had statutory rights to develop all federal land in the area, an assumption not supported in the record.

In this case, US Gypsum cannot demonstrate “that a person of ordinary prudence would be justified in further expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine. This prudent person test has been refined to require a claimant to show that the mineral is ‘marketable,’ that is, that it can be extracted, removed, and marketed at a profit.” United States v. Williams, 64 IBLA 346, 348 (1982). This definition of discovery does not allow claimants to speculate as to future market conditions; a valid mining claim must possess a mineral deposit capable of being extracted, processed, and marketed at a profit at all relevant times. United States v. Alaska Limestone Corp., 66 IBLA 316 (1982); United States v. Bartlett, 2 IBLA 274 (1971).

The fundamental requirement for a mining claim to be valid is that there be a “discovery of a valuable mineral deposit” on each claim. 30 U.S.C. § 22. This explicit language requires that a discovery be made within the boundaries of *each and every* placer mining claim. See Gwillim v. Donnellan, 115 U.S. 45 (1885); 43 C.F.R. § 3842.1-1. Given the clear statutory mandate, the IBLA has found that a claimant “must show *as to each claim* that they have found a valuable mineral deposit and that a prudent man would have been justified in the further expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine *on that claim*.” United States v. Melluzzo, 76 Interior Dec. 181, 189 (1969) (emphasis in original). The Interior Department and the federal courts have repeatedly asserted this rule requiring a discovery within the boundaries of each and every claim in cases where a claimant holds a number of adjacent mining claims as a group. See Lombardo Turquoise Milling & Mining Co. v. Hemanes, 430 F. Supp. 429 (D. Nev. 1977) *aff’d*, 605 F.2d 562 (9th Cir. 1979) (mem.).

In this case, many, if not most, of US Gypsum’s mining claims do not pass this test. The IBLA has defined how a claim should be analyzed to determine the presence (or absence) of a valuable mineral deposit: “Claim validity is determined by the ability of the claimant to show that a profit can be made **after** accounting for the costs of compliance with all applicable laws . . .” Great Basin Mine Watch, 146 IBLA 248, 256 (1999) (emphasis added). The cost figures used by a claimant to prove the existence of a valuable mineral deposit should show that the claimant has a reasonable likelihood of developing a paying mine. In re Pacific Coast Molybdenum Co., 90 ID 352, 361 (1983). See also, U.S. v. Alaska Limestone Corp., 66 IBLA 316, 323 (1982) (The focal question in the prudent man test is the development of a valuable mine.).⁸

It appears that in this case, US Gypsum may attempt to prove a discovery by grouping together, or aggregating, all or several of its placer mining claims. Such a tactic

⁸ In addition, the State of California has recently stated some of the **minimum** reclamation requirements. See February 4, 2003 Letter from James S. Pompy, Manager, Reclamation Unit, California Office of Mine Reclamation to Jurg Heuberger, Imperial County Planning Department

violates the 'discovery on every claim' requirement of the Mining Law. As noted above, the Mining Law explicitly requires an independent marketable discovery on each claim. "[W]here mining claimants are seeking to validate a group of claims, they must show that a valuable mineral deposit exists on each claim. **A showing that all of the claims taken as a group satisfy the requirements of discovery is not sufficient.**" State of California v. Doria Mining and Engineering Corp., 17 IBLA 380, 396 (1974)(emphasis added), *affirmed* Doria Mining & Engineering Corp. v. Morton, 420 F.Supp. 837 (C.D. Cal. 1976), *vacated on other grounds* 608 F.2d 1255 (9th Cir. 1979).

Even if BLM and the Interior Department somehow determine that US Gypsum may aggregate its claims for purposes of proving a "discovery," most if not all of its claims are still likely invalid. The IBLA has held that even where the legally dubious practice of "aggregation" is allowed, "the recovery expected from each claim must not only exceed the costs of mining, transporting, milling, and marketing the particular deposit on that claim but each claim must also bear a proportionate share of the development and capital costs attributable to the combined operation." United States v. Collord, 128 IBLA 266, 287-88 (1994). This Collord "pro-rata" test applies, however, only after the claimant has established both that valuable mineral deposits actually exist on the claims (i.e. mineral concentration above the cut-off grade) *and* after the claimant has established that the overall operation, including all of the claims in a group, will be profitable. *See* United States v. Feezor, 130 IBLA 146 (1994); United States v. New Jersey Zinc Co., 74 Interior Dec. 191 (1967); United States v. Denison, 76 Interior Dec. 223, 243 (1969).⁹

Indeed, it appears as though US Gypsum may have substantial trouble complying with the "pro-rata" test. This is primarily as a result of the position of US Gypsum's claim locations. For instance, the Mesquite claim appears to only slightly cover potentially mineralized land, and similar problems appear to exist for US Gypsum's other claims, including but not limited to, the Coyote, Yeso, Borrego, "W," "X," Providence, Montana, Indiana, Connecticut, Arkansas, and Alaska claims. Overall, the evidence in the record demonstrates the lack of a valid discovery based on claim location and mineralization, in addition to lack of profitability. Given this record, the BLM cannot simply assume validity and proceed under the 1872 Mining Law. Rather, it must satisfy the record as the validity of these claims or proceed under its fully discretionary authority.

⁹ Although several of US Gypsum's placer mining claims are grouped together (e.g. Coyote, Yeso, Borrego, Ironwood, Gypsy, and Mesquite in one block, "W," "X," "Y," and "Z" in another block, and Alaska, Arizona, Arkansas, Connecticut, and Delaware in still a third distinct block), aggregation, to the extent it is allowed at all, is permitted for placer claims only for adjacent or contiguous claims. Thus, even if aggregation applies, these three groupings must be analyzed independently from each other, and also independently from the isolated Indiana, New Orleans, Montana, and Providence claims, which in turn must also be analyzed independently with regard to the ability to support a paying mine in light of reclamation and other costs, including the application of the 'pro rata' test. *See* United States v. New York Mines, 105 IBLA 171 (1988).

In addition to US Gypsum's failure to demonstrate a discovery on every claim when taking all costs into account, as well as failure to demonstrate compliance with the "pro-rata" test to the extent aggregation is allowed, the BLM cannot assume validity of US Gypsum's unpatented mining claims for the independent reason that the record demonstrates US Gypsum's inability to comply with the Interior Department's "Excess Reserves" policy. See March 22, 1996 Memorandum (M-36984) from the Interior Department Solicitor to Director, Bureau of Land Management regarding Excess Reserves Under the Mining Law.

As discussed in the November 30, 1998 Letter from Robert M. Waiwood, BLM Mineral Examiner to M. William Tilden, attorney for US Gypsum, the "Excess Reserves" policy requires that patent applicants provide substantial information regarding the company's mining plans before such the "Excess Reserves" analysis can be completed. The record reveals that US Gypsum cannot comply with this requirement.

With regard to the BLM's determination on the validity of US Gypsum's claims under the "Excess Reserves" policy, the November 30, 1998 letter, Mr. Waiwood, at 1-2, describes these requirements with specificity:

BLM policy now directs that in the determination of marketable reserves, those reserves supporting both discovery on each PMC [Placer Mining Claim] as well as the mineral character of each 10-acre parcel of a placer mining claim, is now limited to 40 years of marketable product in the deposit. Material in excess of that which is projected to be sold in the 40 years where demand has been established are considered "unmarketable resources", and any 10-acre parcel of land encompassing such resources are not considered mineral in character. If such unmarketable resources encompass a PMC, then the deposit on the PMC is not considered as meeting the test of discovery.

The period for beginning the 40 year market projection is the date of the FHFC, unless further information required by the regulations is requested from the applicant (date that all requirements of the application have been fulfilled), then it is the date the information has been provided.

Reserves are determined to be that portion of the mineral deposit "held" by the claimant for the benefit of the market where it is sold and used in the 40 year period. Held means mineral deposits owned or controlled by USG (including, but not limited to fee[] holdings, mining lease, and mining claims). The market is that region where gypsum is sold or utilized in other industrial products. In addition, BLM must use the mining sequence that is currently outlined in a plan of operations when calculating the 40-year reserve base. The plan of operations defines the mine models and scheduling in support of the "prudent and efficient manner" (43 CFR 3809.0-5(k)) in developing the subject deposit. For example, if a mine plan exists for an operation, then the determination of marketable reserves will reflect the scheduling stated in the approved mine plan, this being the "prudent and proficient" means to develop the gypsum deposit(s) in that market.

When the 40-year reserve base has been defined, PMC's encumbering this reserve base in whole or in part will be considered as having met the test of discovery, and each 10-acre parcel will be considered mineral in character. A mining claim may be considered invalid, or a 10-acre parcel may not be mineral in character, if that portion of the deposit will not be mined until after 40 years of market reserves owned by the claimant on other property is mined.

Thus, the BLM must provide some evidence in the record that US Gypsum could at least comply with the requirements set forth in the November 30, 1998 letter in order to justify the agency's assumption of validity.

Overall, it appears that US Gypsum likely cannot meet the patenting requirements set forth in the Interior Departments "Excess Reserves" policy. As such, the BLM should reject the patent application.

B. Even if Some US Gypsum Mining Claims are Valid, BLM Cannot Assume a Right to All the Land Claimed.

Even if claim aggregation is allowed, and all of the claims individually pass the pro-rata share test and the excess reserves test, the BLM still has misapplied its regulatory authority in this case for the lands including in placer claims that encompass more land than allowable under the Mining Law. The Mining Law grants the right to patent surface ground on a placer claim only to the extent that each 10-acre parcel is mineral in character. See U.S. v. McCall, 7 IBLA 21 (1972). In this case, it appears that many of the 10-acre parcels within US Gypsum's placer mining claims are not mineral in character and thus not subject to the Mining Laws constraints on BLM authority.

The Interior Board of Land Appeals has enunciated the rules the BLM must follow in dividing up placer claims for purposes of ensuring that each 10-acre parcel is mineral in character as required. In U.S. v. Lara (On Reconsideration), 80 IBLA 215, 216 (1984), the Board set forth that in applying the 10-acre rule, each claim must be subdivided along the axis in which it was laid out on the ground.

As applied to US Gypsum's claims, it appears that several claims improperly include 10-acre parcels not mineral in character. For instance, according to US Gypsum's own maps depicting the potential quarry areas and potential underground mine areas, provided to Protestors through the Freedom of Information Act, at a minimum, the Coyote, Yeso, Borrego, Mesquite, Gypsy, Ironwood, "X," Providence, Montana, Indiana, Connecticut, Alaska, and Arkansas appear to have major portions of lands not mineral in character. See Map compiled and drawn by R.J. Beckman, July 1998, Revised October 1998 entitled "United States Gypsum Co. Plaster City, California Township 9 South, Range 9 East" and depicting locations of Diamond drill core holes, Placer mining claim boundaries, Overburden thickness isopach in 100 foot intervals, Cross-section in sand-wash area, Potential quarry areas in sand-wash, and Potential underground mine areas in sand-wash. As such, the BLM must apply its full discretionary regulatory authority to

any mining activities proposed on any 10-acre parcel not overlying lands mineral in character.

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C. The BLM Must Properly Regulate Utility Corridors Under FLPMA Title V.

The BLM appears to recognize its full discretionary authority in reviewing and deciding whether to authorize any utility transmission, water lines, or similar uses as a Special Use Permit under FLPMA Title V. Such Title V Special Uses (e.g., right-of-ways) are completely discretionary and must account for a number of public interest factors. In other words, the agency is under no obligation to approve the water supply and tailings pipelines.

A leading Interior Department (Interior Board of Land Appeals, or IBLA) decision details these requirements in the context of specifically rejecting any argument that water pipelines are covered by the “access” provisions of federal mining law.

Desert Survivors argues that the BLM decision ... was in error because it concludes that Title V of the Federal Land Policy and Management Act of 1976 (FLPMA), 43 U.S.C. § 1761-1771 (1982), does not apply to diversion of water for use in mining, and because the BLM decision sent the case back to the Desert District Office for reconsideration under Interior Department regulations governing mining. Rather, Desert Survivors contends, FLPMA repealed statutes that previously governed rights-of-way used to divert water for use in mining, and consolidated prior law governing rights-of-way into the comprehensive provisions of Title V.

30-78

...
Clearly, FLPMA repealed or amended previous acts and Title V now requires that BLM approve a right-of-way application prior to the transportation of water across public land for mining purposes. See 43 U.S.C. § 1761 (1982). As was the case prior to passage of Title V of FLPMA, however, approval of such an application remains a discretionary matter and the Secretary has broad discretion regarding the amount of information he may require from an applicant for a right-of-way grant prior to accepting the application for consideration. Bumble Bee Seafoods, Inc., 65 IBLA 391 (1982). A decision approving a right-of-way application must be made upon a reasoned analysis of the factors involved in the right-of-way, with due regard for the public interest. See East Canyon Irrigation Co., 47 IBLA 155 (1980).

BLM apparently contends that a mining claimant does not need a right-of-way to convey water from land outside the claim for use on the claim. It asserts that such use is encompassed in the implied rights of access which a mining claimant possesses under the mining laws. Such an assertion cannot be credited.

The implied right of access to mining claims never embraced the right to convey

water from outside the claim for use on the claim. This latter right emanated from an express statutory grant in the 1866 mining act. See 30 U.S.C. § 51 (1970) and 43 U.S.C. § 661 (1970). In enacting FLPMA, Congress repealed the 1866 grant of a right-of-way for the construction of ditches and canals (see § 706(a) of FLPMA, 90 Stat. 2793) and provided, in section 501(a)(1), 43 U.S.C. § 1761(a)(1), for the grant of a right-of-way for the conveyance of water under new procedures. In effect, Congress substituted one statutory procedure for another. **There is simply no authority for the assertion that mining claimants need not obtain a right-of-way under Title V for conveyance of water from lands outside the claim onto the claim.**

Nor does 43 CFR Subpart 3802 imply otherwise, as suggested by the State Office. **The fact that these regulations require consideration of impacts generated by access to mining claims in an environmental assessment of a mining plan of operations has no bearing on the question whether rights-of-way must be obtained.** These are clearly independent questions. **Thus, [the mining company] must obtain a right-of-way and BLM is required, prior to approving a plan of operations, to consider the effect of the right-of-way together with the pipeline to be conducted on the claim.** We perceive no conflict between these requirements.

Desert Survivors, 96 IBLA 193, 195-197 (1987)(emphasis added), 1987 IBLA LEXIS 81. See also Far West Exploration, 100 IBLA 306, 309, n. 4 (1987) (“such a [FLPMA] right-of-way must be obtained prior to transportation of water across Federal lands for mining.”); Wayne D. Klump, 130 IBLA 98, 101 (1995)(“Further, pipelines for conveyance of water as well as associated development across public lands must generally be authorized under the regulations governing rights-of-way. See 43 CFR 2800.0-7 and Desert Survivors, 96 IBLA 193, 196 (1987), finding that a mining claimant was required to obtain a right-of-way from BLM for conveyance of water from public lands outside his claim onto the claim, pursuant to Title V of the Federal Land Policy and Management Act of 1976 (FLPMA), 43 U.S.C. §§ 1761-1771 (1988) (now implemented by Departmental regulations at 43 CFR Part 2800).”).

Thus, the BLM must meet all of its obligations under FLPMA Title V in processing US Gypsum’s application for rights of way. In addition, the BLM must analyze, and ensure, the protection of the public interest and public treasury, as required by FLPMA. FLPMA states that “[t]he Congress declares that it is the policy of the United States that ... (9) the United States receive fair market value of the use of the public lands and their resources unless otherwise provided for by statute.” 43 U.S.C. § 1701(a). See Mineral Policy Center v. Norton, 292 F.Supp.2d 30 (D.D.C. 2003).

V. Impacts to Wilderness are Not Properly Analyzed.

As an initial matter, it appears from the draft EIR/EIS that the maps provided do not show whether mining activity will reach to the border of the Fish Creek Mt. Wilderness Area, and this issue needs to be clearly laid out. As a substantive matter, the

draft EIR/EIS indicates that there will be no new impacts to the Wilderness Area because activity is already occurring and so noise and lights, etc. will not be a new impact. This approach violates NEPA and CEQA, especially given that the operation expansion appears to be almost tripling the quarry size, which certainly will have greater impacts, particularly if it extends all the way to the boundary of the Wilderness area. The agencies must fully assess these impacts in any final document.

Further, despite the apparent position of the agencies in the draft EIR/EIS, the CDPA does not give carte blanche for activities near Wilderness Areas. While that statute does indicate that the existence of Wilderness in the vicinity of activity does not in and of itself preclude such activity, there is no support for a position that impacts to Wilderness from the activity will be ignored in any way. The EIR/EIS treats the CDPA language as an allowance to overlook any real impacts to Wilderness. The agencies must fully review these impacts, including all aspects of environmental health such as water, air quality, recreation, social, and visual impacts.

The draft EIR/EIS analysis of Wilderness impacts is based in large part on claims that few people visit the Wilderness area, so the likelihood of impact is negligible. This position is untenable for two reasons. First, the draft EIR/EIS does not provide any date or other information in support of this assumption that few people visit. As discussed herein, NEPA and CEQA require full scientific integrity and support in the record for any assumptions made in assessing impacts. Second, and regardless of visitation numbers, it does not matter how many people visit a Wilderness area because its wilderness qualities are not dependent on the presence of people. The agencies must address and analyze the impacts to wilderness as mentioned above.

Lastly, the draft EIR/EIS takes the unsupportable position that no direct impacts will occur to Wilderness because the quarry itself is outside the borders of the Wilderness Area. However, any of the following things (certainly not an exhaustive list) could directly impact the Wilderness: impacts to wildlife, impacts to air quality, impacts to waters in the Wilderness, inviting trespass of vehicles into Wilderness, or potential to blast or otherwise mine across the boundary. These impacts must be considered and fully explained, and a plan must be in place to mitigate or avoid these concrete impacts.

V. Conclusion.

In summary, the current draft EIR/EIS has not adequately disclosed, analyzed, avoided, minimized, and mitigated the environmental impacts of the proposed project. Because of the document's shortcomings, the public and decision makers cannot make informed decisions about the proposed project's costs in areas including biological resources, water resources, visual resources, and air and water quality.

Should the County and BLM wish to move forward with the proposed project, the conservation groups look forward to reviewing a revised Draft EIR/EIS.

Please ensure that each of the conservation groups is provided with all future notices and documents regarding the proposed project at the addresses provided below.

Submitted by,

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Letter 30
Sierra Club, San Diego Chapter, July 17, 2006

Comment 30-1:

Response: As explained in Section 2.6.1 of the Draft EIR/EIS, comments received by the lead agencies during the scoping session for this EIR/EIS indicated that concerns about the potential effects of the Project on groundwater were of paramount concern. Moreover, because the Plant and the Quarry were already operating at their current locations prior to commencement of environmental review of the Project, the range of alternatives that have the potential for avoiding or substantially lessening any significant effect of the Project other than groundwater is very limited. For these reasons, each of the alternatives selected for evaluation in the Draft EIR/EIS are alternatives that are potentially capable of avoiding or substantially lessening the potential effects of the Project on groundwater. See CEQA Guidelines, § 15126.6(b) (The discussion of alternatives shall focus on alternatives to the Project or its location, which are capable of avoiding or substantially lessening any significant effects of the Project).

Under CEQA, an EIR must identify and discuss a reasonable range of potentially feasible alternatives and compare their environmental impacts with those of the proposed project. However, there is no requirement that the EIR itself also contain an analysis of the feasibility of the various project alternatives or mitigation measures. To the contrary, CEQA specifically provides that it is the public agency, not the EIR, that bears the responsibility for making findings as to whether specific economic, legal, social, technological or other considerations make infeasible the mitigation measures or alternatives identified in the EIR. Thus, the Draft EIR/EIS in this case was not required to provide further information about the cost of obtaining water from alternative sources or otherwise assess the feasibility of obtaining such alternative sources. See *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco*, 102 Cal.App.4th 656, 690-691 (2002); CEQA Guidelines § 15131.

See also General Response 4.3.4 (Water Use Alternative).

Comment 30-2:

Response: The Draft EIR/EIS identifies and analyzes numerous mitigation measures. See Draft EIR/EIS, Table S-1 (Summary of Potential Impacts and Mitigation Measures). It is anticipated that all of the mitigation measures identified in the Final EIR/EIS will be adopted by the lead agencies as conditions of approval and/or will be implemented pursuant to an adopted regulatory program. Therefore, all of the mitigation measures will be fully enforceable.

The County is required to adopt a reporting or monitoring program for the changes made to the Project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment (Mitigation Monitoring Program). However, there is no requirement that the Mitigation Monitoring Program be included in the Draft EIR/EIS itself. Rather, the Mitigation Monitoring Program must be adopted by the public agency at the time of project approval. See Pub. Res. Code § 21081.6.

Comment 30-3:

Response: As explained in the Draft EIR/EIS, between the time of the Superior Court's decision in 1999 to uphold the County's 1998 negative declaration for the Project and the Court of Appeal's decision in 2000, the Plant expansion/modernization and other components of the Project were substantially completed. However, because the environmental review process began in 1998, the lead agencies determined that the baseline for evaluating the potential environmental effects of the Project would be the physical conditions that existed in 1998. See Draft EIR/EIS, pp. 1.0-8 through 1.0-11 and 2.0-7 through 2.0-18.

The mitigation measures identified in the Final EIR/EIS have been designed to avoid or reduce any adverse changes to the physical conditions that existed in the area as compared to baseline (1998) conditions. There is no evidence that the completion of portions of the Project in 2000 following the Superior Court's judgment upholding the previous Negative Declaration and before the Court of Appeal's decision requiring the County to prepare an EIR for the Project has resulted in any significant effects on the environment.

Comment 30-4:

Response: As discussed in Section 4.4 of the Draft EIR/EIS, the Project is not expected to have any growth inducing impacts.

Comment 30-5:

Response: The environmental setting is discussed generally in Sections 2.2 (Background) and 2.3 (Baseline Conditions) of the Draft EIR/EIS, and in substantial detail throughout the "Environmental Impacts" Sections of the Draft EIR/EIS (Sections 3.1 – 3.13) under the heading "Affected Environment." This discussion, which totals several hundred pages, provides more than enough information to adequately evaluate and understand the potential significant effects of the Project and its alternatives. See CEQA Guidelines, § 15125 ("The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives").

The comment identifies no specific shortcomings in the Draft EIR/EIS' discussion of the environmental setting for the Project. Therefore, no further response is required.

Comment 30-6:

Response: An EIR must identify both mitigation measures and alternatives to the proposed project. Additionally, an EIR must identify any "significant effects on the environment that cannot be avoided if the project is implemented." See Pub. Res. Code § 21100(b).

The commenter is correct that the Draft EIR/EIS states that the Project may have a Basin-wide impact on groundwater that is significant, unavoidable, and unmitigatable. See discussion of Impact 3.3-2 on pages 3.3-75 through 3.3-77 of the Draft EIR/EIS. This statement was intended to address CEQA's requirement that an EIR identify any significant effects on the environment that cannot be avoided if the project is implemented, i.e., after all feasible mitigation measures are imposed and without consideration of project alternatives, which are discussed in separate sections of the Draft EIR/EIS.

In this case, the Draft EIR/EIS clearly states that at least two of the alternatives discussed in the document (the "Partial Use" and "Full Use" of IID Water Alternatives) would avoid the potential Basin-wide impacts on groundwater. Thus, the Draft EIR/EIS satisfies CEQA's requirement that alternatives be described that would "avoid or substantially lessen any of the significant effects of the project, and to evaluate the comparative merits of the alternatives." CEQA Guidelines, § 15126.6(a).

Comment 30-7:

Response: The Draft EIR/EIS evaluated three alternatives to the Proposed Action: no action, partial use of water from IID and full use of water from IID (Volume I, Section 2.6, Alternatives). In addition, the analysis considered but rejected for economic, environmental or technical factors four project alternatives:

- Drilling production wells near the plant
- Drilling new production wells near Ocotillo
- Alternative locations
- Inert material storage

Additional information on the potential for obtaining water from the IID is presented in General Response 4.3.4. Although the feasibility of the "partial use" of IID water alternative remains unknown, no reasonable alternative has been "dismissed" based solely on a lack of information necessary to evaluate the alternative.

The requirement that a reasonable range of alternatives be evaluated in the Draft EIR/EIS was not "relaxed" because portions of the Project were already constructed before completion of the Draft EIR/EIS, as suggested by the commenter. Moreover, the Draft EIR/EIS did not "dismiss as impractical" the evaluation or consideration of the "no project" alternative. On the contrary, after explaining that it would be "impractical" to evaluate every conceivable permutation of the "no project" alternative, the Draft EIR/EIS took the most conservative position, stating that for purposes of the EIR/EIS, the "no project" alternative assumes that no elements of the Project would be implemented. See Section 2.6.2 of the Draft EIR/EIS. Using this definition, the "no project" alternative was properly evaluated in the Draft EIR/EIS.

See also Responses to Comments 30-1 and 30-3.

Comment 30-8:

Response: The lead agencies have determined that no feasible alternative locations exist for the Project. The reasons for this conclusion are stated in Section 2.6.5.3 of the Draft EIR/EIS. Among other things, the Draft EIR/EIS notes that USG has been operating continuously at the Plant and Quarry since 1945, and that USG has a vested right to continue quarrying gypsum at the site. See CEQA Guidelines, § 15126.6(f)(2)(B) ("For example, in some cases, there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given location"). Moreover, there is no indication that USG can reasonably acquire or otherwise gain access to an alternative site for the Plant. See CEQA Guidelines, §§ 15126.6(f)(1) (stating that the proponent's ability to acquire, control or otherwise have access to the alternative site may be taken into account when addressing the feasibility of alternatives) and 15126.6(f)(3) ("An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative").

See also Responses to Comments 30-1 and 30-7 above.

Comment 30-9:

Response; See Responses to Comments 27-1 through 27-54.

Comment 30-10:

Response: The water supply for the proposed Project is not "uncertain." The existing and proposed water supplies for the Plant expansion/modernization and Quarry operations were identified and described in detail in Section 3.3 of the Draft EIR/EIS. Furthermore, there is an ample supply of water in the Ocotillo-Coyote Wells Groundwater Basin to serve the Project. The Project's proposed water usage of up to 767 AF/Yr would represent only a small fraction of the

total amount of groundwater in storage in the aquifer, which is estimated to be approximately 1.2 million acre-feet or more. Additionally, these wells have served the Plant and some Quarry water needs for over 60 years. Thus, there is no basis to assert that a "shortfall" in this water supply is "certain" to occur.

The requirements of California Water Code §§ 10910-10915 apply only to "projects" as defined in Water Code §10912(a):

"Project" means any of the following:

- (1) A proposed residential development of more than 500 dwelling units.
- (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- (4) A proposed hotel or motel, or both, having more than 500 rooms.
- (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- (6) A mixed-use project that includes one or more of the projects specified in this subdivision.
- (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project."

The Project in this case is not a "proposed" industrial, manufacturing, or processing plant. Rather, the Project consists of the proposed expansion and modernization of an *existing* wallboard manufacturing plant and associated Quarry. Moreover, the reported groundwater usage from the Ocotillo-Coyote Wells Groundwater Basin has fluctuated considerably over the years, ranging from a low of 153 acre-feet in 1946 to a high of 767 acre-feet in 1972. Because the proposed water usage for the Project would not exceed USG's reported historical maximum use, the Project's "demand" for water will not exceed the amount of water that USG is already entitled to extract for the existing operation. Thus, the Project does not fall within any of the categories of projects listed in Water Code § 10912, and a formal water assessment is not required.

Nonetheless a water assessment is provided in Appendix C of the Final EIR/EIS. Furthermore, the discussion contained in Section 3.3 of the Draft EIR/EIS and these Responses to Comments address the relevant requirements of Water Code §§ 10910 *et seq.*:

Water Code §10910(b) – There is no water system that is, or may become as a result of supplying water to the Project, a public water system as defined in Water Code § 10912(c).

Water Code §10910(c)(3) – The projected water supplies available during normal, single dry, and multiple dry water years during the 80-year life of the Project will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses, including agricultural and manufacturing uses. See Draft EIR/EIS, Sections 3.3 and General Responses 4.3.5 (Groundwater Management Ordinance) and 4.3.11 (Land Use).

Water Code §10910(d)(1) – The current and historic use of groundwater from the Ocotillo-Coyote Wells Groundwater Basin is discussed on pages 3.3-26 through 3.3-30 of the Draft EIR/EIS. There are no existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the Project other than the following: (1) the Director's March 8, 2006 decision to conditionally approve the registrations for USG's three existing water wells used to extract groundwater from the Ocotillo-Coyote Wells Groundwater Basin and for the water pipeline used to transport water to the Plant; and (2) any claims of water rights that may be asserted by existing water users under California law.

Water Code §10910(f)(2) – The groundwater basins from which the proposed Project will be supplied are described in Section 3.3 of the Draft EIR/EIS. Neither of these basins has been adjudicated. In California's Ground Water, Bulletin No. 118, the California Department of Water Resources states as follows:

"A recent water budget for [The Ocotillo-Coyote Wells Groundwater Basin] is not available. Skrivan estimated that infiltration of precipitation supplies an average of 2,600 af/yr of recharge to the basin. Pumping was estimated at about 900 af and evapotranspiration was estimated at 300 af for 1975 (Skrivan 1977). Groundwater loss by underflow was estimated at 1,450 af to Mexico and 450 af to the Imperial Valley Groundwater Basin for 1975 (Skrivan 1977). Using these values, Skrivan (1977) calculated that the Coyote Wells Groundwater Basin was overdrafted about 500 af in 1975. DWR (1975) estimated natural runoff for the basin to be 300 af/year."

Water Code §10910(f)(3) and (4) – The County has not pumped any groundwater from the basins from which the proposed Project will be supplied.

Water Code §10910(f)(5) – An analysis of the sufficiency of the groundwater from the basins from which the proposed Project will be supplied to meet the Project water demands associated with the proposed Project is provided in Section 3.3 of the Draft EIR/EIS.

Water Code §10911(c) – The information contained in the Draft EIR/EIS and these Responses to Comments provides substantial evidence to support a finding by the County that the projected water supplies will be sufficient to satisfy the demands of the Project, in addition to existing and planned future uses.

Water Code § 10911(a) – Even if the County determines that the water supplies will be insufficient, the requirements of Water Code § 10911(a) have been met. Specifically, the information contained in the Draft EIR/EIS and these Responses to Comments includes a discussion of plans for acquiring additional water from the IID, including the measures that are being undertaken to acquire and develop this potential water supply. See Draft EIR/EIS, Sections 2.6.3 and 2.6.4 and General Response 4.3.4 (Water Use Alternative).

Comment 30-11:

Response: The commenter seeks mandatory monitoring and reporting of groundwater extraction by USG for permit compliance and mitigation purposes, if such became applicable. First, as relates to monitoring and extraction of groundwater, USG is required to install and has installed water flow measuring devices on its wells. USG reports such data to County annually. See Imperial County Ordinance, Title 9, Division 22. USG has submitted annual groundwater reports for several years. Additionally, the Proposed Action includes a monitoring program to provide consistent, long-term data regarding the Ocotillo-Coyote Wells Groundwater Basin. See Draft EIR/EIS, page 3.3-81.

Comment 30-12:

Response: See Response to Comment 25-8.

Comment 30-13:

Response: See Response to Comment 20-23 regarding water relations and rooting depths of desert shrubs. Pumping is not expected to affect water levels at rooting depth. No impacts to localized phreatophyte vegetation are expected to occur. There are no anticipated impacts to desert vegetation on slopes, bajadas, and desert floor that acquire water from precipitation percolating in the soil. Impacts to water sources within the drainage are addressed in Section 3.3 Hydrology and Water Quality, Volume I, Draft EIR/EIS and Appendices 3.4 and 3.5, Volume II, Draft EIR/EIS.

With regard to potential impacts on seeps and springs of increased Quarry pumping, see Response to Comment 28-18. There are no springs or seeps

within the area of the Quarry and no known springs or seeps in the vicinity of the Quarry Well No. 3, located at the margin of the Ocotillo Valley Groundwater Basin. Increased pumping at the Quarry, amounting to about 18 acre-feet per year, is miniscule relative to local irrigation pumping.

With regard to subsidence, land subsidence pertains to the inelastic compaction of sediments due to lowering of groundwater levels. The types of geologic formations that are most susceptible to significant land subsidence are relatively young fine-grained deposits that are commonly associated with bays, lakes or peat. Examples include the Bay Muds in the San Francisco Bay area, the Corcoran Clay in the San Joaquin Valley, or the peat deposits in the Sacramento River Delta. Lowering of the water table allows for the weight of the sediments to compact the grains into a smaller volume. This inelastic compaction cannot be repeated after this compaction has taken place. Therefore, older sediments are less susceptible to subsidence as they have likely been previously compacted. For example, in the Ocotillo-Coyote Wells Groundwater Basin, the Tertiary sediments of the Palm Springs and Imperial Formations should be considered to have already undergone significant compaction and; therefore, would be considered to have little potential for further land subsidence. The recent alluvial sediments both in the Ocotillo-Coyote Wells Groundwater Basin and vicinity of the quarry are more coarse-grained deposits with few significant fine-grained layers. The sand and gravel grains are less susceptible to compaction than fine-grained deposits, so the alluvial aquifer would be considered to have little potential for further land subsidence.

With regard to potential impacts on seeps and springs of pumping from the Ocotillo-Coyote Wells Groundwater Basin for the Plant, there are no known springs or seeps in the vicinity of the USG wells.

Comment 30-14:

Response: Mitigation Measure 3.3-1 requires USG to implement at least one of the four identified measures if and when the specified events occur. Each of these measures evinces a commitment to achieve a performance standard that will ensure that the potential impact of the Proposed Action on individual wells will be reduced to a level of insignificance. Therefore, the fact that USG may select which measure to implement in a given situation does not render the mitigation measure inadequate or unenforceable. *See* CEQA Guidelines, § 15126.4(a)(1)(B) (mitigation measures "may specify performance standards which would mitigate the significant effects of the project and which may be accomplished in more than one specified way"); *Sacramento Old City Association v. City Council of Sacramento*, 229 Cal.App.3d 1011 (1991) (upholding an agency's decision to approve the expansion of a convention center even though the agency had not determined which of the five identified

options for mitigating the project's impact on traffic and parking would eventually be implemented).

As revised, Mitigation Measure 3.3-1 requires review by the Imperial County Planning Commission (Commission) to determine the "extent to which the Proposed Action will be considered as contributing to the decrease in water levels in the Ocotillo area..." This review is necessary because the precise cause of a water level decline or reduction in the available water to the affected user may not be readily apparent in a given case, and USG cannot be required to mitigate impacts that it did not cause. See Guidelines, § 15026.4(a)(4) (mitigation measures "must be consistent with all applicable constitutional requirements," including the requirement that the measure be at least "roughly proportional" to the impacts of the project). However, there is no reason to believe that the required review by the Commission would unduly delay implementation of the required mitigation. Moreover, this mitigation measure, coupled with the County's Groundwater Management Ordinance, provides ample authority for the County to take all reasonable and necessary actions to ensure that any impacts on individual wells caused by the Proposed Action are mitigated to a level of insignificance.

Comment 30-15:

Response: See Responses to Comments 30-14 and 30-25.

Comment 30-16:

Response: To clarify the statement on page 3.1-5 of the Draft EIR/EIS, permanent surface water is not present in the Ocotillo-Coyote Wells Groundwater Basin. due to the depth of the water table proposed increased pumping of USG's wells for use at the Plant will not affect any spring, water hole, or other surface water source that may be reserved for public use pursuant to Public Water Reserve No. 107.

Ephemeral surface waters in the vicinity of the Quarry are described on pages 3.1-5, 3.1-6, 3.3-98, 3.3-99, and 3.5-23 of the Draft EIR/EIS. For the reasons discussed on pages 3.5-43 through 3.5-45 of the Draft EIR/EIS, the proposed pumping of the new Quarry well would have a less than significant impact on discharge of San Felipe Creek and Fish Creek Springs. The Draft EIR/EIS also concludes on pages 3.3-101 and 3.3-102 that the potential impacts of the Proposed Action on existing flows of surface water at the Quarry site will be mitigated to a level of insignificance with the implementation of Mitigation Measure 3.3-7. Therefore, the Proposed Action will not adversely affect any spring, water hole, or other surface water source in the vicinity of the Quarry that may be reserved for public use pursuant to Public Water Reserve No. 107.

Comment 30-17:

Response: The Draft EIR/EIS does not "admit" that proposed pumping will impact springs or waterholes located miles from the pumping, such as those supporting desert pupfish. On the contrary, the Draft EIR/EIS concludes, on pages 3.5-43 through 3.5-45, that the proposed pumping of the new Quarry well would have no effect on the discharge of San Felipe Creek and Fish Creek Springs, and hence no impact on desert pupfish habitat.

See also Response to Comment 30-16.

Comment 30-18:

Response: No response is necessary because the comment contains only legal contentions and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

See also Responses to Comments 30-16 and 30-17.

Comment 30-19:

Response: Section 302 of the FLPMA (43 U.S.C. 1732(b)) states, "...no provision of this section or any other section of the Act shall in any way amend the Mining Law of 1872 or impair the rights of any locators or claims under that Act, including but not limited to, rights of ingress and egress. In managing the public lands the Secretary, shall by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands."

USG proposes to use only that amount of water that is necessary for its mining and manufacturing activities on land that is privately owned or subject to claims under applicable federal statutes. The Draft EIR/EIS addresses the potential impacts on the proposed groundwater pumping on both public and private land and water resources in the vicinity of the Project site, and concludes on the basis of substantial evidence that no such land or water resources will be degraded as a result of the Proposed Action.

See also Responses to Comments 30-16 and 30-17.

Comment 30-20:

Response: No response is necessary because the comment contains only legal contentions and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

See also Responses to Comments 30-16 and 30-17.

Comment 30-21:

Response: No response is necessary because the comment contains only legal contentions and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

See also Responses to Comments 30-22, 30-23, 30-24, 30-25 and 30-26.

Comment 30-22:

Response: The commenter correctly notes that the Ocotillo-Coyote Wells Groundwater Basin has been designated by the EPA as a "sole source aquifer" ("SSA"). USG actively participated in this process and supported EPA's determination. A SSA designation is a tool to help protect drinking water supplies in areas where there are few or no alternative sources to the groundwater resource and where, if contamination occurred, using an alternative source would be extremely expensive. The designation protects an area's groundwater resource by requiring the EPA to review certain proposed projects within the designation area. Proposed projects receiving federal funds are subject to review to ensure that they do not endanger the water source.

The SSA protection program is authorized by Section 1424(e) of the Safe Drinking Water Act of 1974. It states the following:

"If the administrator determines, ... that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register. After the publication of any such notice, no commitment for federal financial assistance ... may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health, but a commitment for federal assistance may, if authorized under another provision of law, be entered into to plan or design the project to assure that it will not so contaminate the aquifer."

Additionally, the commenter suggests that the EPA has not discharged its responsibility to protect this water resource. However, the SSA protection program only requires an EPA review where and when federal financial assistance is committed. That is not the case here. Nonetheless, the main point of the comment, that the groundwater resource should be protected, is acknowledged and addressed in the Draft EIR/EIS.

Comment 30-23:

Response: See Response to Comment 25-8.

Wastewater discharge from sanitary facilities at the Plant and Quarry are relatively small, and are treated under permits issued by the California Regional Water Quality Control Board. Discharges of stormwater from the Plant and Quarry are regulated pursuant to National Pollution Discharge Elimination System (NPDES) permit requirements.

The potential impact of wastewater or stormwater discharges from the Proposed Action was not identified as a significant issue during the public scoping process. Given the relatively small amounts of wastewater and stormwater discharges from the Plant and Quarry, and in light of the applicable permit requirements, the possible significant effects of additional wastewater or stormwater discharges associated with the Proposed Action were determined not to be significant by the Lead Agencies and therefore not discussed in detail in the EIR/EIS. See Guidelines, § 15128.

Comment 30-24:

Response: The Draft EIR/EIS includes an extensive discussion of the Project's potential impacts on water quality. See Draft EIR/EIS, Section 3.3. This discussion identifies mitigation measures and evaluates a reasonable range of alternatives to the Proposed Action that have the potential to avoid or lessen potential impacts on water quality.

The Draft EIR/EIS does not attempt to minimize the significance of the potential impacts and does not "dismiss" all of the identified alternatives. To the extent that alternatives have been rejected in the EIR/EIS as infeasible, the factual and/or legal basis for that determination has been set forth in the document.

See also General Responses 4.3.4, 4.3.5, 4.3.6, and 4.3.7.

As supplemented by these responses to comments, the EIR/EIS' discussion of the potential impacts on water quality is supported by substantial evidence and constitutes a good faith effort at full disclosure. See Guidelines, § 15151 ("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/EIS inadequate . . . The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.")

Comment 30-25:

Response: In the event that the Proposed Action causes the concentration of TDS or other identified constituents to exceed specified levels in individual wells, Mitigation Measure 3.3-2 requires USG to provide the affected users with an replacement supply of water. The amount of replacement water that may need

to be provided under this measure will depend on the characteristics of the affected well and other factors that are unknown at this time. However, Mitigation Measure 3.3-2 evinces a commitment to achieve a performance standard that will ensure that the potential impact of the Proposed Action on individual wells will be reduced to a level of insignificance. *See* CEQA Guidelines, § 15126.4(a)(1)(B) (mitigation measures "may specify performance standards which would mitigate the significant effects of the project and which may be accomplished in more than one specified way"); *Sacramento Old City Association v. City Council of Sacramento*, 229 Cal.App.3d 1011 (1991) (upholding an agency's decision to approve the expansion of a convention center even though the agency had not determined which of the five identified options for mitigating the project's impact on traffic and parking would eventually be implemented).

Pursuant to the provisions of Mitigation Measure 3.3-2, USG may, under specified circumstances, elect to provide bottled water to an affected party as a replacement water supply for drinking and cooking purposes. Bottled water is generally available for purchase from existing vendors serving the region. In the event that USG elects (or is required) to provide a hookup to an existing municipal district or other appropriate water supply system, the water would likely be produced by another well (or wells) within the Ocotillo-Coyote Wells Groundwater Basin.

With respect to the requirements of the Water Code relative to water supply planning, see Response to Comment 30-10.

As revised, Mitigation Measure 3.3-2 requires review by the Imperial County Planning Commission (Commission) to determine the "extent to which the Proposed Action will be considered as contributing to the decrease in water quality in the Ocotillo area..." This review is necessary because the precise cause of a decrease in water quality in an individual well may not be readily apparent in a given case, and USG cannot be required to mitigate impacts that it did not cause. *See* Guidelines, § 15026.4(a)(4) (mitigation measures "must be consistent with all applicable constitutional requirements," including the requirement that the measure be at least "roughly proportional" to the impacts of the project). However, there is no reason to believe that the required review by the Commission would unduly delay implementation of the required mitigation. Moreover, this mitigation measure, coupled with the County's Groundwater Management Ordinance, provides ample authority for the County to take all reasonable and necessary actions to ensure that any impacts on individual wells caused by the Proposed Action are mitigated to a level of insignificance.

Comment 30-26:

Response: See General Responses 4.3.6, 4.3.7, 4.3.8 and Responses to Comments 9-2 and 30-1.

Comment 30-27:

Response: See General Responses 4.3.1, 4.3.2, and 4.3.3. The quarry's impact on Peninsular bighorn sheep, desert pupfish and flat-tail horned lizard is addressed in Volume I, Section 3.5 of the EIR/EIS. Background reports in support of the analysis appear in Volume II, Appendix C. The potential impacts of quarry expansion on desert pupfish and flat-tail horned lizard were determined to be non-significant or mitigated to a level of non-significant.

Impacts to Peninsular bighorn sheep are subject to a Section 7 consultation with U.S. Fish and Wildlife Service (USFWS). A Draft Biological Assessment of the Quarry project has been submitted to the BLM for review. The BLM anticipates consulting with the USFWS under Section 7 of the federal Endangered Species Act. The BLM will finalize and submit the Biological Assessment, describing the project, including all proposed mitigation, and analyzing its potential impacts to Peninsular bighorn sheep. The USFWS will issue a Biological Opinion determining whether the proposed Project would jeopardize the continued existence of Peninsular bighorn sheep, or whether it would cause adverse modification of designated critical habitat. Note also that the critical habitat designation has been modified by consent decree to exclude the Quarry project area and most of the existing narrow-gauge rail line.

No permanent surface water exists on the quarry site or its expansion area.

Biological surveys for the Project (Appendix C) found no federally listed species on the Project site, though Peninsular bighorn sheep sign (feces) was found at one location. The comment identifies no specific shortcomings in the baseline information on biological resources as provided in the Draft EIR/EIS. Baseline information on biological resources is provided in the Affected Environment and Environmental Impacts Sections of the Draft EIR/EIS (Sections 3.4 – 3.5) and in Appendices C1, C2, and C3.

Comment 30-28:

Response: Impacts to wildlife on and around the Project site are described in Section 3.5 of the Draft EIR/EIS. Diffuse impacts away from the proposed activity itself, including noise, dust, and lighting, are discussed in Responses to Comments 19-9 and 20-27 above. Neither CEQA nor NEPA state or imply any requirement to consider project impacts to "all possible species." Mitigation measures presented in the Draft EIR/EIS are in fact real.

Comment 30-29:

Response Lists of all plant and wildlife species observed during field surveys are included in Appendices C-1 and C-2 (Biological Technical Reports for the USG Plant Site and Quarry Site, respectively).

Comment 30-30:

Response: Potential project impacts to species whose habitat occurs on-site but not located during the field surveys are described in Appendices C-1 and C-2 (Biological Technical Reports for the USG Plant Site and Quarry Site, respectively).

Comment 30-31:

Response: Plants or animals may be ranked with special conservation management status due to declining populations, vulnerability to habitat change, or restricted distributions. Certain species have been listed as rare, threatened or endangered under state or federal Endangered Species Acts, and some others are candidates for listing or are proposed for listing as rare, threatened or endangered. Some species are not formally listed under state or federal Endangered Species Acts are included in the BLM list of "Sensitive Species." Many other "special status" plants and animals are included in lists or compendia maintained by public agencies or private conservation organizations (referenced in Appendices C-1 and C-2 of the Draft EIS/EIR). Most "sensitive" species or "special status" species do not meet CEQA criteria for mandatory findings of significance. Findings of significance in the Draft EIS/EIR are consistent with CEQA guidelines.

CEQA guidelines require a "mandatory finding of significance" for substantial adverse impacts to rare, threatened or endangered species. The guidelines further define these terms to apply to state or federally listed rare, threatened or endangered species or to species that meet the criteria for listing as described in the state or federal Endangered Species Acts. The guidelines quoted 15065 DO NOT specify that impacts to sensitive species require a mandatory finding of significance. Most special status species are not listed, proposed for listing, or candidates for listing. Based on present understanding of their distribution, habitat, and abundance, most special status plants and animals do not meet criteria for listing under state or federal Endangered Species Acts. The Project is subject to a consultation with U.S. Fish and Wildlife Service on Peninsular bighorn sheep. Also see General Responses 4.3.1, 4.3.2, and 4.3.3.

Comment 30-32:

Response: See Response to Comment 30-31 above.

Comment 30-33:

Response: See General Response 4.3.1. See Response to Comment 20-15 regarding validity report. The comment that the existing quarry “already impairs bighorn movement” may be correct, to the extent that Peninsular bighorn sheep probably avoid the Quarry and facilities when they are in the area (see Response to Comment 19-9 above). But the Project site and surrounding lands are at the margin of occupied habitat, have no surface water source, and are not within the home range of any known ewe group. Contract biologists attribute the scarcity of Peninsular bighorn sheep sign primarily to marginal habitat conditions rather than effects of the Quarry. The existing Quarry and proposed Quarry expansion are bounded on three sides by undeveloped open space on State Parks and BLM Wilderness lands. These public lands are extensive to the west and south, though not to the east. Contract biologists found no evidence of established travel routes on or around the proposed Quarry expansion site, but extensive movement habitat is available. Project impacts to Peninsular bighorn sheep, proposed mitigation measures, and the anticipated Section 7 consultation are described further in the Peninsular bighorn sheep section, above.

Comment 30-34:

Response: See General Response 4.3.1.

Comment 30-35:

Response: See General Response 4.3.1. There is no evidence that Peninsular bighorn sheep cross the rail line at the proposed Quarry Well No. 3 site. Habitat at and around the site is marginal and there has been no documentation of Peninsular bighorn sheep use there (U.S. Fish and Wildlife Service 2000, Figure 6). The effects of construction at the proposed well site would be limited to initial construction and infrequent maintenance. There would be no long-term disturbance effects, except the periodic pump system switching off or on. The proposed well site has been excluded from critical habitat under a court-ordered consent decree, described in the Peninsular bighorn sheep section, above.

Comment 30-36:

Response: Project impacts on foraging habitat are addressed under General Response 4.3.1. Patent applications are not under consideration in the EIR/EIS.

Comment 30-37:

Response: See General Response 4.3.1.

Comment 30-38:

Response: See Response to Comment 20-27 above. Also see General Response 4.3.10.

Comment 30-39:

Response: See Response to Comment 20-45 above and General Response 4.3.10. No modeling of PM₁₀ was conducted to determine its extent of travel or deposition as dust emissions are estimated to be less than baseline conditions due to implementation of project design features conditioned in USG's air quality permits and mitigation measures and compliance with existing ICAPCD rules and regulations.

Comment 30-40:

Response: See Responses to Comments 19-9, 20-27, 20-41, and 20-43 above. Noise from blasting occurs on-site during daylight. Noise is minimal and does not impact off-site known receptors. Blast noise is typically perceived more as vibration than audible noise with daily blasts occurring in urban area across the Country going completely undetected. The reader should refer to Section 3.12 Acoustics/Noise of Volume 1 of the Draft EIR/EIS.

Impacts to wildlife have been moderately examined in the technical literature. Indications of wildlife habituation to noise and blasting is typical. Propane canons are often used to discourage bird activity in open leach field operations. The blasts are several magnitudes louder than ore blasts. Animals often become habituated requiring timing variations to achieve the desired aversion effect.

The site and surrounding area is so sparsely populated due to heat, lack of vegetation (forage) and water that additional analysis on blast impacts to wildlife including noise profiling would at best be inconclusive. USFWS is being consulted on Peninsular bighorn sheep impacts through a Section 7 consultation with BLM.

Comment 30-41:

Response: See General Responses 4.3.12 Climate Change and 4.3.1 Peninsular Bighorn Sheep.

Comment 30-42:

Response: See General Response 4.3.1 and maps of regional ewe group home ranges (U.S. Fish and Wildlife Service 2000). The proposed Project would have no tendency to limit local Peninsular bighorn sheep habitat use to lower elevations. There is no reason to believe that the proposed Project would have

a detectable if possible affect on climate change that would directly impact localized Peninsular bighorn sheep populations. Climate change is a global issue beyond the scope of localized qualification let alone assessment. The Proposed Action represents a continuation of existing operations that would not constitute a increase in greenhouse gas emissions. The main source greenhouse gas emissions in mining operations is heavy earthmoving equipment. The balance of power is provided by electricity from the commercial grid.

Comment 30-43:

Response: See General Response 4.3.2. Desert pupfish occurrences in Anza-Borrego Desert State Park are “refugia populations” (U.S. Fish and Wildlife Service 1986; 1993) well outside the watershed area of the proposed USG Projects (map 3.5-4 in the Draft EIR/EIS). There would be no identifiable project impacts to those occurrences. Potential project impacts to hydrology in San Sebastian Marsh and its tributaries are addressed under General Response 4.3.2 above. Development on privately owned lands adjacent to the designated critical habitat (U.S. Fish and Wildlife Service 1986) is not under consideration in this document.

The USG Quarry and proposed Quarry expansion are within the watershed of Fish Creek Wash and the proposed Quarry Well No. 3 is in the Carrizo Wash watershed (Figures 3.5-2 and 3.5-4). Potential project impacts are addressed above under General Response 4.3.2 and in the sections of the Draft EIR/EIS and Appendices cited there. The three USG water wells in Ocotillo are outside the San Sebastian Marsh watershed (Figure 3.5-2). Carrizo Wash drains the south and east-facing slopes of the Fish Creek Mountains and the north facing slopes of the Coyote Mountains. The Ocotillo area is in the Coyote Wash watershed, south of the Carrizo Wash watershed and about 20 miles south of San Sebastian Marsh and the designated desert pupfish critical habitat in Carrizo Wash. “Ocotillo Valley” as referenced in Section 3.3.4.1 refers to the groundwater basin beneath the “Lower Borrego Valley” where Ocotillo Wells is located. The Ocotillo-Coyote Wells Groundwater Basin, where the three USG wells are located, is described in Section 3.3.2.

Comment 30-44:

Response: As stated in the Draft EIR/EIS and the Reclamation Plan mining is proposed in an ephemeral channel that is tributary to Fish Creek Wash. Regarding the comment on the desert pupfish see General Response 4.3.2. See also Responses to Comments 28-18 and 28-26.

Comment 30-45:

Response: The reader should review Appendix C-4 and C-5, Volume II, Draft EIR/EIS, which clearly states that the total diversion runoff from the Quarry of 1,055 acres of precipitation at the Quarry would restrict a total volume of .07 percent of the drainage area. In fact this volume would not be diverted but would stay within the Basin minus the amount lost to evaporation. The removal of a maximum 26 acre-feet per year of water through the operation of the Quarry well is determined to be insignificant. The effects of operating the well field are addressed in Chapter 3.3 Hydrology and Water Quality, Volume I, Draft EIR/EIS.

Comment 30-46:

Response: See General Response 4.3.2. The lead agencies were unable to identify any past, present, or probable future projects that would incrementally contribute to the potential effects of the Project on any other environmental resource in the Quarry area. Therefore, the potential "cumulatively considerable" as defined in CEQA Guideline § 15065. See also CEQA Guideline, § 15130 ("The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence" and "should be guided by the standards of practicality and reasonableness ...").

Comment 30-47:

Response: See General Response 4.3.2.

Comment 30-48:

Response: Comment noted without agreement. See General Response 4.3.2.

Comment 30-49:

Response: The Project site is outside the known extant and historic geographic range of the desert tortoise and would not affect desert tortoises or designated critical habitat (Draft EIR/EIS p. 3.5-34 and Appendix C-1 p. 9). The Project site is well outside mapped Desert Tortoise Recovery Units and proposed Desert Wildlife Management Areas as mapped in the Desert Tortoise Recovery Plan (Desert Tortoise Recovery Team 1994, pp. 23 and 39-42). The proposed Project would not reduce the numbers or restrict the range of desert tortoises through direct, indirect, or cumulative effects. The proposed Project would not conflict with the Desert Tortoise Recovery Plan or necessitate consultation with the U.S. Fish and Wildlife Service regarding desert tortoise. The proposed Project would not increase traffic or pollution within desert tortoise habitat or designated critical habitat. It would not alter desert tortoise food supplies and it would not eliminate or fragment desert tortoise habitat. See

Responses to Comments 19-9, 20-23, 20-27, 20-45, above regarding dust, noise, plant/water relationships, and animal migration.

Comment 30-50:

Response: The barefoot banded gecko's geographic range approaches the proposed Quarry expansion area where suitable habitat occurs. During field surveys for the proposed Project, contract biologists made extensive efforts to locate barefoot banded geckos, but did not find them. Rather than conclude that barefoot banded gecko is absent or unlikely to occur, the Draft EIR/EIS concludes that its occurrence probability is unknown, due to poor documentation of its range. Further field surveys now would disturb habitat with little prospect of advancing present knowledge. Habitat destruction by collectors is among the principal threats to the species (California Department of Fish and Game 2005). Based on best available knowledge, field surveys completed to date, and analyses per CEQA and NEPA described in the Draft EIR/EIS, the BLM and Imperial County conclude that the proposed Project would not impact barefoot banded geckos. Therefore, no mitigation is proposed for habitat loss or take of the animals. Because of uncertainty about geographic range and the possibility that barefoot banded geckos could move onto the site before Quarry expansion in any given area, the Draft EIR/EIS requires the applicant to contract for further surveys in advance of each expansion phase to ensure that any new occurrence will be brought to the attention of the California Department of Fish and Game, as trustee agency per the California Endangered Species Act.

The barefoot banded gecko's range may also extend as far southeast as the proposed well site near Ocotillo, but there is no suitable habitat (rocky, boulder-strewn foothills) at the proposed well site or along the proposed pipeline alignment. Thus, the BLM and Imperial County conclude that it is absent from the area, and proposed water system construction and operation would not impact barefoot banded geckos. The effects of the proposed water system on soil moisture, vegetation, and wildlife habitat (including barefoot banded gecko habitat) are described in Responses to Comments 30-13, 30-45 above. Response to Comment 20-23 above describes soil-water relationships between surface vegetation and deeper aquifers; this discussion applies to plants making up barefoot banded gecko habitat.

Comment 30-51:

Response: See General Response 4.3.3.

Potential Project impacts to flat-tailed horned lizard (FTHL), including potential impacts of rail traffic, are described above and in the Draft EIR/EIS Section 3.5 and Appendices C-1 and C-2. Because the U.S. Fish and Wildlife Service has withdrawn its proposal to list FTHL as threatened, no FTHL

critical habitat designation is under consideration. FTHL is not listed, proposed for listing, or a candidate for listing under state or federal Endangered Species Acts. Adverse impacts to FTHL or their habitat do not meet CEQA criteria for mandatory findings of significance (see Response to Comment 30-31 above). Contrary to the comment, the western 2.5 miles of the proposed pipeline are not occupied by FTHL (see Draft EIR/EIS Appendix C-1). No element of the proposed Project is within the Yuha Desert FTHL Management Area as mapped in the Rangewide Management Strategy.

According to the Rangewide Management Strategy (2003, p. 14), “FTHL are less likely to be run over on railroads [than on roads], but the tracks may create a significant barrier to movements.” The proposed Project would have no new effect on movement because the rail line is already in place. It is possible that present rail use causes FTHL mortality if FTHLs fail to move away as trains approach. There have been anecdotal observations of FTHL on the tracks but there are no data available to quantify their use of the rail line or their behavioral response to approaching trains. If FTHL regularly bask on the tracks and if they do not move away as trains approach, then increased rail traffic would likely cause increased FTHL mortality along the rail line. Without data, the likelihood and extent of this effect is unknown.

Alternatives to the proposed Project are described and analyzed in the Draft EIR/EIS. If approved, the project will comply with mitigation and management measures of the Rangewide Management Strategy. The Rangewide Management Strategy does not recommend or require quantification of existing or future FTHL mortality on rail lines. Further, it does not recommend or require quantification of potential effects of increased noise, air pollution, or startle effects on FTHL. The Rangewide Management Strategy does not purport to prevent every potential cause of FTHL mortality. The proposed Project could cause increased FTHL mortality, but is not inconsistent with the Rangewide Management Strategy.

The FTHL Rangewide Management Plan was prepared by qualified biologists representing several public agencies including the BLM, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. The Rangewide Management Strategy requires specific management and mitigation measures for a wide range of possible project-related impacts to FTHL or its habitat both within the FTHL Management Areas and outside them. Imperial County and the BLM are satisfied that these measures adequately avoid or mitigate potential project-related impacts to FTHL. Construction, maintenance, and operation of proposed pipelines, the rail line, proposed Quarry Well No. 3, and all other aspects of the proposed Project, if approved, will avoid or compensate for impacts to FTHL habitat in compliance with mitigation measures described in the Rangewide Management Strategy.

Comment 30-52:

Response: See Response to Comment 30-31 above. Adverse impacts to chuckwallas or their habitat do not meet CEQA criteria for mandatory findings of significance.

Comment 30-53:

Response: See Response to Comment 30-31 above. Adverse impacts to American badger or its habitat would not meet CEQA criteria for mandatory findings of significance.

Comment 30-54:

Response: See Response to Comment 30-31 above. Adverse impacts to Colorado Valley woodrat or its habitat would not meet CEQA criteria for mandatory findings of significance.

Comment 30-55:

Response: See Response to Comment 30-31 above. Carlson's dune beetle, Hardy's dune beetle and Andrews' dune scarab beetle are known from the Algodones Dunes and there are no known occurrences on or near the proposed Project site, though windblown sand along the existing narrow-gauge railway may provide suitable habitat. Potential project impacts to insects in the area are minimal, since the only proposed change to existing facilities and uses would be increased daily rail traffic. None of the three species are listed, candidates for listing, or proposed for listing under state or federal Endangered Species Acts. The U.S. Fish and Wildlife Service (2006b, 2006c) concluded that petitions to list Hardy's dune beetle and Andrews' dune scarab beetle did not present sufficient scientific information to warrant listing, and declined to initiate further review. Thus, neither species meets criteria for federal listing and adverse impacts, if any were to occur, would not meet CEQA criteria for mandatory findings of significance. The USFWS has not considered listing Carlson's dune beetle, but its conservation status with the California Department of Fish and Game (S2) indicates that it does not meet criteria for listing and adverse impacts, if any were to occur, would not meet CEQA criteria for mandatory findings of significance.

Comment 30-56:

Response: See Response to Comment 30-31 above. Adverse impacts to special status bats or their habitat would not meet CEQA criteria for mandatory findings of significance.

Comment 30-57:

Response: See Response to Comment 30-31 above. Adverse impacts to black-tailed gnatcatcher or its habitat would not meet CEQA criteria for mandatory findings of significance.

Comment 30-58:

Response: See Response to Comment 30-31 above. Adverse impacts to loggerhead shrike or its habitat would not meet CEQA criteria for mandatory findings of significance.

Comment 30-59:

Response: See Response to Comment 30-31 above. Adverse impacts to burrowing owl or its habitat would not meet CEQA criteria for mandatory findings of significance.

Comment 30-60:

Response: See Response to Comment 30-31 above. Adverse impacts to Leconte's thrasher or its habitat would not meet CEQA criteria for mandatory findings of significance.

Comment 30-61:

Response: See Response to Comment 30-31 above. Adverse impacts to special status raptors or their habitat would not meet CEQA criteria for mandatory findings of significance.

Comment 30-62:

Response: See Response to Comment 30-31 above. Adverse impacts to migratory birds or their habitat do not meet CEQA criteria for mandatory findings of significance. The Bald and Golden Eagle Protection Act (BGEPA) prohibits taking eagles or possessing or trading in eagle parts (e.g., nests or eggs). No aspect of the proposed Project would violate the BGEPA.

The surveys described in the Draft EIR/EIS provide the necessary data for impacts analysis. Birds do occur within the Project areas, as described in the Draft EIR/EIS. Depending on scheduling and implementation, several elements of the Project, particularly vegetation clearing in advance of Quarry construction, could destroy birds' nests or kill nesting birds. Mitigation Measure 3.5-1c is intended to determine whether or not nesting birds are present in project impact areas in advance of vegetation clearing.

Mitigation Measure 3.5-1c is revised as followed:

In order to avoid incidental killing of birds protected under the Migratory Bird Treaty Act, clearing or initial grading will be conducted outside the breeding seasons of most birds (i.e., clearing should not take place from March through July) or areas to be cleared will be surveyed for breeding birds prior to clearing and, if breeding birds are present, vegetation clearing will be postponed until after the breeding season.

Comment 30-63:

Response: See Responses to Comments 20-27, 20-29, and 24-9 above. Special status plants are discussed in Section 3.5 of the Draft EIR/EIS and in Appendices C-1 and C-2, particularly the Special Status Species Tables at the ends of both appendices. Field surveys were carried out during appropriate times of year and during several different years, representing a range of climatic conditions. All habitat types on the site were visited and surveys were well-documented by the reports appended to the Draft EIR/EIS, follow-up memoranda, and voucher specimens deposited at the Rancho Santa Ana Botanic Garden Herbarium. Plant surveys conformed to recommendations by the California Native Plant Society, California Department of Fish and Game, and U.S. Fish and Wildlife Service. The Draft EIS/EIR concludes that several special-status plants could occur in the Project area. In fact, one special status plant, Coulter's lyrepod, was found during follow-up surveys. Adverse impacts to Coulter's lyrepod or any of the special status plants potentially occurring but not found during field work, would not meet CEQA criteria for "mandatory findings of significance" if they should occur on the Project site.

Comment 30-64:

Response: Comment noted. See General Responses 4.3.1, 4.3.2, 4.3.3 and Mitigation Measures Sections 3.4.4 and 3.5.4 in the Draft EIR/EIS and Appendix A of the Final EIR/EIS.

Comment 30-65:

Response: Air quality is discussed in Section 3.6 of the Draft EIR/EIS. The local and regional impacts to air quality based on the net new emissions were documented. Particulate matter less than 10 microns in diameter (PM₁₀) is expected to be reduced by approximately 79 tons per year at the Quarry and plant due to additional controls including enclosures, baghouses, and paving. Carbon Monoxide (CO) and NO_x emissions were determined by modeling to not cause or contribute to a violation of any applicable air quality standards. NO_x, an ozone precursor, was required to be offset at a 1.2 to 1 ratio, which totaled 65 tons.

Potential construction emissions for the wells and pipelines are included in Section 3.6. Also see General Response 4.3.10.

Comment 30-66:

Response: Sulphur oxide (SO_x) and VOC emissions estimates are included for the Quarry in the Draft EIR/EIS in Table 3.6-12 and for the Plant in Table 3.6-10. Based on the thresholds of significance, the emissions from these two pollutants are less than significant. CO was determined to exceed thresholds and subsequently an air dispersion modeling analysis was conducted per ICAPCD rules. The modeling results determined that the CO emissions would not cause or contribute to a violation to any applicable air quality standards (refer to pages 3.6-43 through 4.6-45 and detailed in Appendix D2 of the Draft EIR/EIS).

Comment 30-67:

Response: Comment noted. See Response to Comment 30-65. The Plant and Quarry are required to comply with all existing applicable air quality regulations. As new rules are adopted the Plant will be required to comply. Future equipment replacement will require use of Best Available Control Technology (BACT). Also see General Response 4.3.10.

Comment 30-68:

Response: See Responses to Comment 30-65, 30-66, and 30-67 above. Also see General Response 4.3.10.

Comment 30-69:

Response: See Response to Comment 16-16.

Comment 30-70:

Response: The potential growth inducing impacts of the Proposed Action are discussed in Section 4.4 of the Draft EIR/EIS. Specifically, the Draft EIR/EIS notes that the Project would increase employment by approximately 140 jobs, and concludes that this limited increase is not substantial in relation to the total number of persons employed in the region and would not have a growth inducing effect because housing is available in the area to accommodate the increase. The Project will not affect land use patterns or population density, and will not significantly foster growth in the region directly or indirectly.

Comment 30-71:

Response: See General Response 4.3.12.

Comment 30-72:

Response: The potential cumulative effects of the Project on groundwater are discussed in Section 3.3.6 of the Draft EIR/EIS. Indeed, the Draft EIR/EIS concludes that the Project will have significant and unavoidable cumulative effects on groundwater levels.

The lead agencies were unable to identify any past, present, or probable future projects that would incrementally contribute to the potential effects of the Project on any other environmental resource. Therefore, other than the Project's potential effect on groundwater levels in the Ocotillo-Coyote Wells Groundwater Basin, the potential effects of the Project are not "cumulatively considerable" as defined in CEQA Guideline § 15065. See also CEQA Guideline, § 15130 ("The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence" and "should be guided by the standards of practicality and reasonableness ...").

Comment 30-73:

Response: The Draft EIR/EIS properly identifies and analyzes the unavoidable significant effects of the Project as required by Sections 15126 and 15126.2 of the CEQA Guidelines. See Draft EIR/EIS, pp. 3.3-66 through 3.3-108.

The irreversible environmental changes and irretrievable commitment of resources associated with the Proposed Action is discussed in Section 4.2 of the Draft EIR/EIS.

Comment 30-74:

Response: See General Response 4.3.13 (Recirculation of the EIR/EIS).

Comment 30-75:

Response: Comment noted. The Draft EIR/EIS depicts those lands owned by USG and those for which patent claims are pending. USG and its predecessors have been mining in this quarry since the 1920s. This demonstrates a profitable operation. Additionally, the comment confuses the relationship of the mineral patenting process under the Mining Law of 1872, and the NEPA process to analyze the impacts of the plan of operations. Environmental planning documents for a proposed plan of operations such as an EIS are not created for the purpose of analyzing whether mining claims satisfy the legal requirements for patenting under the Mining Law. See Office of the Solicitor Decision in re: Crown Resources Corporation, December 20, 2004 (Appendix E of the Final EIR/EIS). Similarly, issuance of a mineral patent is not a major federal action, and it is well-established that NEPA does not require that an EIS be prepared prior to the issuance of a mineral patent. See Office of the Solicitor Decision

in re: Mount Emmons Mining Company, April 2, 2004 (Appendix F of the Final EIR/EIS). The process by which USG seeks to patent its mining claims is not determinative of the NEPA analysis in the EIS analyzing the impacts of the plan of operations.

Comment 30-76:

Response: Comment noted. The issues raised are not an appropriate subject for considering the sufficiency of the Draft EIR/EIS. Rather, these issues are the subject of the Center for Biological Diversity (CBD's) patent protest. See Response to Comment 30-75.

Comment 30-77:

Response: Comment noted. The issues raised are not an appropriate subject for considering the sufficiency of the Draft EIR/EIS. Rather, these issues are the subject of the CBD's patent protest. See Response to Comment 30-75.

Comment 30-78:

Response: No response is required because the comment contains only legal contentions and does not raise a significant environmental issue concerning the Proposed Action. See CEQA Guidelines, § 15204(a).

Comment 30-79:

Response: The Quarry's location in relationship to the Fish Creek Mountains Wilderness Area are clearly depicted in Figures 2.0-1, page 2.0-3 of the Draft EIR/EIS, Volume I; Figure 2, page 3, Regional Map of Appendix C3, Volume II of the Draft EIR/EIS and Figure 2, page 3, Regional Map, Mine Reclamation Plan, April 2006. The Quarry abuts but does not overlap the WSA on the eastern boundary. The Draft EIR/EIS addresses impacts to the surrounding area from Quarry operations within the property and off-site. The County and BLM will weigh those potential impacts in light of the analysis and within the guidelines of the appropriate governing plans and policies including the CDPA.



Letter 31

United States Department of the Interior

U.S. GEOLOGICAL SURVEY
California Water Science Center
San Diego Projects Office
4165 Spruance Road, Suite 200
San Diego, California 92101-0812
Office: (619) 225-6100 Fax: (619) 225-6101
<http://water.wr.usgs.gov>

July 31, 2006

Imperial County Planning & Development Service
Attention: Jurg Heuberger
801 Main St.
El Centro, CA 92243

Dear Mr. Heuberger:

I have reviewed the April 2006 Draft Environmental Impact Report/Environmental Impact Statement (EIR) prepared for the United States Gypsum Company Expansion/Modernization Project. This review includes the Geology and Hydrology and Water Quality sections pertaining to Plant water usage. In general, the report is well written and easy to follow. The figures need improved explanations and quality—they are hard to interpret in their current form. Technically the EIR relies too much on modeled water levels and aquifer properties instead of measured values. Because models are only a representation of the real system, the monitoring plan is the most important aspect of the EIR. More details need to be presented in the document describing the management of the monitoring program. Comments regarding specific sections of the EIR are presented below.

Geology

Report indicates that Elsinore and Laguna Salada Faults may not be connected but doesn't report how this was determined, except by reference.

Figure 3.2-1 Figure needs explanation describing geologic units.

Geologic sections need to be added in this part of the report to show the relation between the different geologic units.

31-1

Hydrology and Water Quality

USGS water-level data are referenced in Appendix B-1. Water-level and water-quality data are presented only until 2001. Recommend including the 2001-2005 data.

Hydrology—Recharge of 1,077AF/yr was assumed. In the report this value is listed as a conservative value. In as much as other researchers have reported values as low as 536 AF/yr, the word conservative should be deleted. Just present the range, and let the reader determine if the value is “conservative”. Need to add a date for the measured and simulated water-level contours presented on figure 3.3-5. Add measured water levels to figure 3.3-6.

31-2

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January 21, 2008

5.0-437

U.S. Gypsum Final EIR/EIS
IMPERIAL COUNTY
PLANNING & DEVELOPMENT SERVICES

Groundwater Quality—How was figure 3.3-7 created? What year or period does it represent? Show measured data inside and outside of the basin. The report states that TDS is controlled by well depth—the uppermost few feet of groundwater tend to have an elevated TDS level. How was this determined? Are there depth dependent data? Were depth-dependent data collected? Where are the wells that show this relationship? The high TDS in the Tertiary marine sediments is probably the result of their low permeabilities and reflects that the salts in these deposits have not been “flushed” from the system. I don’t think you have to have connate water. Again the report keeps discounting the connection of Elsinore and Laguna Salada fault zones but has yet to present the evidence for discounting the connection. Are the wells with high fluoride, boron, and/or iron in the marine deposits? Help the reader—show on a map or describe in the text.

31-3

Basin Conditions—I don’t see the lines referred to in text. I believe the upgradient line would be northwest of Ocotillo. This part of the report estimates recharge, using Darcy’s Law. The report indicates that this is an independent check on recharge. The problem with this approach is that the water levels and hydraulic properties used to make the calculation come from the simulation model; therefore, they are not independent approaches. This section of the report should be deleted—it makes no sense how it is currently written. Because there is a scarcity of wells in the upgradient and downgradient areas of the basin, it is difficult to estimate recharge and discharge in the basin. This points to the uncertainty of the model estimates. This should be pointed out in the text. The model development and calibration should be described. A sensitivity analysis should be conducted to provide some insight into the model uncertainty.

31-4

Water Level Data—Add recent (2002-2005) data. The thickness of the aquifer needs to be added to the hydrographs. A water-level change of 10 feet might be minor if the aquifer is 1,000 ft thick but if the aquifer is only 100 feet thick it would be a significant change. Geohydrologic cross-sections in the different well fields would help the reader understand the water-level response.

31-5

Area East of Coyote Wells—The report indicates because the water levels are similar between wells 24D1 and 24B1 there is not a fault or barrier between the wells. The difference in water quality sampled by the wells indicates the wells are perforated in different deposits even though they are drilled to about the same depth (128 and 149 ft; respectively). A geologic section would be helpful to explain the geologic differences between the two wells. As shown in the model results (Appendix figure 5-16 and 5-17) the model does a poor job at matching the water levels in 24B1. The model simulated water levels for well 24B1 underestimate the measured water levels, suggesting that a barrier may exist between the wells. The water quality data and the poor simulation of water levels when a fault is not simulated suggest that there is a barrier between the wells.

31-6

Well 29H1 is east of the transition zone and wells 29L1 and 29R2 are west of the transition zone. The report states that the trend in water levels are similar on both sides of the transition in the Coyote Wells area. Inspection of measured and simulated water levels of these wells (Appendix Figure 5-18-

31-7

20) indicate that the model does not match the measured water levels on either side of the transition zone. Measured water levels on the west side of the transition have a steeper decline than on the east side. The model-simulated water levels do not match this steeper decline. Contrary to what is stated in the report, the trend in water levels are not similar on both sides of the transition zone. A barrier at the transition may be needed to simulate the difference between the measured decline on the east and west sides of the transition.

31-7
Con't.

Groundwater Chemistry Data

Water quality data need to include 2002-2005 data.

Discussion of Water Quality Data—The report states that well 24B1 stands apart from the other wells due to its elevated TDS concentration. The well does have a higher TDS concentration but makes it “stand apart” is the higher percentage of sodium and chloride. Well 24B1 could be considered the chemical end member for the Tertiary marine deposits. A line drawn from this well through wells 11H2 and 11H3 on the upper diagram is the mixing line between water in the ground-water basin and water in the Tertiary marine deposits. This section needs to be expanded. Could trace elements or stable isotopes be used to help identify water from the Tertiary marine deposits? Look at ratios of chloride to boron to help develop tracers of inflow from the marine deposits.

31-8

31-9

Thresholds of Significance—What is a substantial degradation of water quality? Please identify the thresholds.

31-10

Propose Action: Impacts and Mitigation Measures—The report states that the ability to maintain current pumping rates may be reduced if the water level in a well drops to near the base of the screened interval. Because the hydraulic conductivity of basin sediments often decrease with depth, pumping rates could be reduced significantly prior to the water level dropping near the base of the screened interval.

31-11

Water Depletion at Plant Affecting Individual Well Owners—Mitigation

Measure--Who is responsible for collecting the water-level data? Will the data be available for all to evaluate? What constitutes the ICGMC? What happens when USG is no longer operating? Will USG provide water to impacted wells after they are no longer operating in the basin?

31-12

Water Depletion at Plant Affecting the Groundwater Basin

Water Quality Degradation at Plant Affecting Individual Well Owners—Saline water present at the water table could affect the quality of water in certain wells. How was it determined that there is saline water present at the water table? The report states that the numerical model indicates that ground water will continue to flow from west to east across the transition from alluvial material to Tertiary marine sediments east of Ocotillo; therefore, there is not likely to be a significant potential for saline water to migrate laterally from the area east of Coyote Wells into the Ocotillo area. As stated previously in this review, the model does a poor job of simulating water levels east of the transition zone. A different conceptual model for the area east of the transition zone could result in a different flow regime. For example if the transition was simulated as a fault, with a local source of recharge (maybe historical recharge) could allow the potential for lateral flow. In any case, the model simulation should not be considered as reality, only one possible realization.

31-13

Mitigation Measure—Who will collect the water-quality data? Will the data be available for all to evaluate? What constitutes the ICGMC? What happens when USG is no longer operating? Will USG provide water to impacted wells after they are no longer operating in the basin? 31-14

Water Quality Degradation at Plant Affecting the Groundwater Basin—Same comments about flow direction as above. 31-15

Groundwater Monitoring Program—The location of MW-1 should be moved closer to the transition area to provide an early warning of lateral migration from the Tertiary marine deposits. Earlier in the report, saline water was reported to be present at the water table. Why isn't a monitor well proposed to monitor this saline water at the water table? MW-2 should have a monitor well installed in the Tertiary marine deposits to provide information on the hydraulic head and water chemistry of the deposits. Again, should a monitor well be installed at the water table to document the reported high saline water at the water table? Who is going to log and design the wells? Will there be input from the ICGMC? 31-16

Why are transducer measurements ending after 10 years? Will the water-level data be available to the public? Why is the trigger set on the basis of model results? The trigger should be based on change relative to current trend. The model could then be used to help determine if the increased pumpage by USG cause the change. 31-17

Boron and bromide need to be analyzed at high precision so that they can be used in conjunction with chloride to determine source of increase TDS. Why wait until TDS reaches 500 mg/L before something is done? 31-18

The report states that water-level and water-quality data will be submitted to the County and the USGS. An agreement would be required for the USGS to enter the data into the USGS national database. The monitoring should continue until water levels or water quality stabilize or return to pre-project conditions, not 10 years after the Plant ceases operation. 31-19

Summary Questions Related to the Monitoring Network--The responsibility for the water sampling and water-level measurements is not clearly stated in the report. Who will make the measurements and collect the samples? Who will pay for the work? Who will store this information? Will the data be available to the public on a real-time basis? Another point that is not clear is who will interpret the hydrologic data to determine if USG pumping is affecting privately owned wells? Who will interpret data to determine if USG is affecting basinwide water levels and water quality? It's not clear how quickly USG will move to mitigate impacts basinwide and on individual well owners. How long is USG going to supply water to affected well owners---forever or until they go out of business? How can impacts on private well owners be determined if the well owner does not volunteer to have their wells monitored? Not volunteering to have their wells monitored should not preclude private wells owners from being supplied with water by USG if it is determine their wells have been affected. There appears to be no plan to expand the monitoring of water levels and water quality if it becomes necessary. Who determines if the 31-20

monitoring program is adequate? The responsibility for construction and maintenance of the two nested well monitoring sites is not specified.

31-20
Con't.

I apologize for submitting this review after the deadline. Should you have any questions regarding these comments do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Martin", written in a cursive style.

Peter Martin
Program Chief

Letter 31
U.S. Department of Interior, July 31, 2006

Comment 31-1:

Response: Early work on the structure of the Ocotillo-Coyote Wells Groundwater Basin generally concluded that the Elsinore fault and Laguna Salada faults were continuous under the alluvium. However, recent work by Dr. Thomas Rockwell, Ph. D. of San Diego State University shows that the Elsinore fault and Laguna Salada faults may not be continuous. This work is discussed in the “Ocotillo/Coyote Wells Hydrology and Groundwater Modeling Study” prepared by Bookman-Edmonston dated January 16, 2004 (Modeling Study) and included as Appendix B2. Draft EIR/EIS Section 3.0 provides an overview of the geology and hydrogeology of the Ocotillo-Coyote Wells Groundwater Basin. Figures 3.1-1A through 3.1-1F provide geologic cross sections that illustrate the revised geologic interpretations of the Basin based on the work of Dr. Rockwell.

The General Response 4.3.6 provides an overview summary of the changes in the geologic interpretations of the Basin and a discussion of recent data (see Appendix C of the Final EIR/EIS).

Figure 3.2-2 has been revised in Appendix A of the Final EIR/EIS.

Comment 31-2:

Response: Comments noted.

Mark (1987), who estimated the 536 AF/Yr recharge estimate, concluded that this estimate was unrealistic and used a value of 1,650 AF/Yr for the recharge rate. Thus, based on the other estimated rates, an estimated rate of 1,077 AF/Yr is at the low end of the values, or conservative, relative to the general range presented. This is a significant point in that a higher recharge estimate could have been used in the groundwater model, which would have produced less of an effect from the Proposed Action.

Additional discussion of the development of the various water balance estimates for the Basin is included in General Response 4.3.7. Further discussion of the development of the model-based water budget is presented in General Response 4.3.8.

Figure 3.3-5 shows a date of 1974-1975 for the measurements.

Comment 31-3:

Response: Figure 3.3-7 should show TDS values not groundwater elevations. A corrected figure is provided.

Figure 5-10 from the 1996 Bookman-Edmonston report provides TDS values related to well depths. Page 5-5 of the report states that shallow wells in the study area as illustrated in Figure 5-10, have TDS concentrations on the order of 600-4,000 mg/L, which indicates that poor quality groundwater overlies better quality groundwater.

The 1996 Bookman-Edmonston report is based on the previous geologic interpretation. As discussed in General Response 4.3.6 and Response to Comment 31-1 (see above), the previous geologic interpretation assumed more widespread distribution of the alluvium and explained variations in water levels and water quality on the presence of an extension of the Elsinore and Laguna Salada faults. Using the previous geologic interpretation, an explanation of the variations of water quality differences was based on evaporation of the shallow water table.

The revised geologic interpretation (based on recent work by Dr. Thomas Rockwell, Ph.D. of San Diego State University) shows the Tertiary sediments are relatively close to the ground surface in several portions of the Basin. Using the revised geologic interpretation, these areas of variable water quality appear to be located in the Tertiary marine sediments. These samples may represent variability of water quality within Tertiary marine sediments. For this study, the important observation is that these samples are representative of the Tertiary marine sediments and not the alluvial aquifer.

At this point, the depth dependent relationship of the water quality within the Tertiary marine sediments has not been fully investigated. There are several potential explanations including, as noted by the commenter, that high salts in the Tertiary marine sediments could be the result of low permeabilities and could reflect deposits that have not been “flushed” and may not be connate.

The distribution of fluoride and iron do not appear to be completely related to the marine deposits. However, boron does appear to follow the marine deposits more closely.

Comment 31-4:

Response: The revised Draft EIR/EIS text (3.3.3.2) is confusing as written, but is not needed for evaluation of the potential impacts on groundwater or definition of appropriate mitigation measures. The revised Draft EIR/EIS is in the errata for clarity purposes.

The Final EIR/EIS includes revised Figures 3.3-5 and 3.3-6.

See also General Responses 4.3.6, 4.3.8, and 4.3.9.

Comment 31-5:

Response: See General Response 4.3.6 for recent data. The aquifer thickness is shown on Figures 3-1B through 3-1F of Bookman Edmonston's 2004 report. The aquifer in the Ocotillo area is approximately 460- to 500-feet thick. The calculated additional drawdown of the aquifer by the Project is expected to be about 20 to 23 feet over the 80-year period. This increased drawdown represents only about 5 percent of the total aquifer thickness.

Comment 31-6:

Response: See Response to Comment 31-1. This work is discussed in the "Ocotillo/Coyote Wells Hydrology and Groundwater Modeling Study" prepared by Bookman-Edmonston dated January 16, 2004 (Modeling Study) and included as Appendix B2. Section 3 provides an overview of the geology and hydrogeology of the Ocotillo-Coyote Wells Groundwater Basin. Figures 3.1-1A through 3.1-1F provide geologic cross sections that illustrate the revised geologic interpretations of the Basin based on the work of Dr. Rockwell.

Additional discussion of the geologic interpretations, water level and water quality trends are included in General Response 4.3.6.

Comment 31-7:

Response: Comment noted. The Elsinore and Laguna Salada faults extension is not included in the current model described in the 2004 Bookman-Edmonston report (Appendix B2 in the Draft EIR/EIS). The hydrogeological conceptual model attributes the groundwater level patterns noted to the Tertiary sediments. Additional discussion of the geologic interpretations, water level and water quality trends are included in General Response 4.3.6.

The model predicts that even though the declines in groundwater levels west of the Elsinore Fault (29L1) and east of the fault (29H1) continue, groundwater flow is expected to continue from west to east as indicated in Figures 6-11 and 6-12 of the Modeling Study. Additional discussion of the development and application of the groundwater model is provided in General Response 4.3.6 and 4.3.9. However, because of this and other uncertainty related to groundwater resources, the Draft EIR/EIS provided the Groundwater Monitoring Plan on page 3.3-81 through 3.3-87, and Mitigation Measures 3.3-1 (pages 3.3-71 through 3.3-72) and 3.3-2 (pages 3.3-78 through 3.3-79).

Comment 31-8:

Response: Comments noted. See General Response 4.3.6.

Comment 31-9:

Response: Stable isotopes or trace elements analysis is not part of the Groundwater Monitoring Plan presented in the Draft EIR/EIS.

Comment 31-10:

Response: The definition for substantial degradation of water quality is stated on pages 3.3-86 and 3.3-87 of the Draft EIR/EIS. In brief, a significant trend will have occurred when a constituent tests three consecutive times above the constituent's 95 percent one-sided tolerance limit as defined by Gibbons (Statistical Methods for Detection Monitoring, in Groundwater Contamination and Analysis at Hazardous Waste Sites, edited by Suzanne Lesage and Richard E. Jackson, Marcel Dekker, Inc., 1992, pp. 199-243). If a significant increasing trend is determined to exist, the monitoring frequency for that well will be increased until such time as the water quality decline returns to below levels of concern. Specific *thresholds* are secondary (aesthetic) drinking water standards; Mitigation Measure 3.3-2 cites TDS levels of 500 mg/L and the secondary drinking water standards for other constituents. If these are exceeded, USG will provide the affected party or parties with an alternative supply of water for drinking and cooking, at no cost to the affected party or parties.

Comment 31-11:

Response: Comment noted. Water levels could also drop in wells or well production could decrease for reasons other than the Project. Well operation and maintenance issues would also need to be evaluated as possible causes. In some cases, the well may be past its operational life, or require maintenance or well development to return to service. Water levels could drop due interference effects due to increased pumping by other adjacent wells.

Comment 31-12:

Response: The actual party conducting the monitoring and the financial arrangement will be approved by the County. The monitoring program will be conducted at the expense of USG.

The water-level data, water-quality data, and statistical analysis of trends will be submitted to the County and the USGS within 60 days after the end of each calendar monitoring period. The public could inspect these data at the County at that time.

Imperial County Groundwater Management Ordinance was described in the Imperial County Groundwater Management Plan as originally adopted. Under the current version of the ordinance the Planning Commission has primary responsibility to implement the ordinance.

USG will be required to mitigate as specified in Mitigation Measures 3.3-1 on pages 3.3-71 and 3.3-72, and in Mitigation Measures 3.3-2 on page 3.3-78 and 3.3-79 of the Draft EIR/EIS. These include periods when USG may no longer be operating.

Comment 31-13:

Response: Comment noted. The paragraph citing saline water at the water table has been deleted from the Draft EIR/EIS as superfluous and confusing. See General Response 4.3.6 regarding the hydrogeologic conceptual model and potential for water quality impacts, and General Response 4.3.8 for evaluation of the numerical groundwater model.

Comment 31-14:

Response: See Response to Comment 31-12.

Comment 31-15:

Response: See Responses to Comments 31-13 and 31-17.

Comment 31-16:

Response: The actual locations of Monitoring Well 1 and Monitoring Well 2 have not been determined, this comment will be considered when the locations are established. Additionally, these proposed monitoring wells are nested and therefore can include monitoring at the water table. The logging and well design will be under the supervision of a California Registered Hydrogeologist.

Comment 31-17:

Response: Transducers should function 10 years after which time significant data and trends will be established to allow less frequent measurements to be taken.

See Responses to Comments 31-10, 31-11, and 31-12.

Comment 31-18:

Response: Comments noted. The maximum containment level (MCL) for TDS is 500 mg/L. However, because the threshold is defined as three consecutive readings above the constituent's 95 percent one-sided tolerance limit (See

Response to Comment 31-10) action could be taken before the 500 mg/L level is reached.

Comment 31-19:

Response: Comment noted.

Comment 31-20:

Response: The hydrologic data will be interpreted by a California Registered Hydrogeologist and is intended to be reviewed by the Planning Commission. The Planning Commission has the authority to request additional reviews if needed. The Planning Commission can determine impacts from the Project, however, some evidence of impact should be required in order to assert damages caused by the Project. The construction and maintenance of the nested wells will be by USG.

See Response to Comment 31-12. See also General Response 4.3.5.

Letter 32



thacerro@yahoo.com

07/14/2006 01:39 PM

To lself@ca.blm.gov

cc

bcc

Subject Please Protect Desert Conservation Area from Expanded Mining Plan

Linda Self
BLM El Centro Field Office
1661 South 4th Street
El Centro, CA 92243

Dear Linda Self,

The EIS needs to be redone. The analysis is woefully inadequate, as it fails to provide the most basic information about the current environmental setting; fails to identify and analyze many of the likely impacts of the project on water resources, water quality, air quality, and biological resources; and fails to identify or adequately analyze alternatives that could avoid or mitigate and minimize such impacts.

The U.S. Gypsum (USG) mine and wallboard production facility must not be allowed to expand. It will result in unacceptable impacts to water resources upon which local communities and many native plants and wildlife depend. This is a conservation area. The word conservation means that the BLM and County authorities have the obligation to put the protection of the water resources ahead of everything else. The continued existence of the native plants and animals in this area depend upon this water. The people living near by depend upon it as well. There is absolutely no way that US Gypsum should be allowed to draw down these aquifers for their personal profit. This is public land and the interests of the public must come first. This protection of the public and the public's natural resources is the job of the BLM and the county. Please start doing your jobs correctly.

Sincerely,

Theresa Acerro
PO Box 8697
Chula Vista, California 91911

Letter 32
Theresa Acerro, July 14, 2006

Comment 32:

Response: Environmental Setting is described in Section 2 of the Draft EIR/EIS. Impacts to the environment are addressed in the following sections of the Draft EIR/EIS.

Water Resources Section 3.3

Water Quality Section 3.3

Air Quality Section 3.6

Biological Resources Sections 3.4 and 3.5

For more information regarding the Project's potential impacts on biological resources, see General Responses 4.3.1, 4.3.2 and 4.3.3 of the Final EIR/EIS.

Alternatives are discussed in Section 2.0 of the Draft EIR/EIS. See also General Response 4.3.4 and Responses to Comments 30-1 and 30-7 in the Final EIR/EIS.

The Project is being undertaken on both public and private property and falls under the jurisdiction of federal and local land use jurisdictions. The Draft and Final Environmental Impact Report/Environmental Impact Statement comply with the State and Federal requirements and will be considered by the lead agencies in conjunction with their review of the Project.

Letter 33

From: Robert Burns [bobburns@simplyweb.net]
Sent: Friday, July 14, 2006 7:21 PM
To: Jurg Heuberger; lself@ca.blm.gov
Subject: Proposed expansion of U.S. Gypsum's destructive mining activities and wallboard production in the California Desert Conservation Area
Attachments: "AVG certification"
Importance: High

I understand that there is a proposed expansion of **U.S. Gypsum's** destructive mining activities and wallboard production in the California Desert Conservation Area. I used to live in Imperial Valley as part of 6 generations that have been there and once adopted the Coyote Canyon Wilderness Area near Ocotillo. I lack details about which to comment except to say that I adamantly oppose any use of any aquifer by **U.S. Gypsum** except to recharge it with potable water; the company can get its water from incoming canals or recycle that from agricultural or municipal operations.

The information in this e-mail is confidential and may be legally privileged. It is intended solely for the addressee. If you are not the intended recipient please delete.

As Mankind becomes more liberal, they will be more apt to allow that all those who conduct themselves as worthy members of the community are equally entitled to the protections of civil government. I hope ever to see America among the foremost nations of justice and liberality.
George Washington.

Without Freedom of Thought, there can be no such Thing as Wisdom; and no such Thing as publick Liberty, without Freedom of Speech.
Benjamin Franklin

Robert Burns, Attorney & Counselor at Law
4877 Voltaire Street
P.O.B. 7263
Ocean Beach (San Diego), CA U.S.A. 92167
(619) 223-0441 (voice)
(847) 557-1220 (e-Fax)

If you do not have eFax Messenger or an eFax Microviewer installed on your PC, download a free copy at <http://www.efax.com/en/efax/twa/page/download>

E-Mail: <RobertBurns@OBLaw.com> TM
URL: <http://www.OBLaw.com> TM
<http://www.RobertBurns.biz>

Letter 33
Robert Burns, July 14, 2006

Comment 33:

Response: Comment noted. The Draft EIR/EIS and Final EIR/EIS are available for review through the local lead agencies.

Letter 34

From: danclose2000@yahoo.com
Sent: Thursday, July 13, 2006 11:51 PM
To: Jurg Heuberger
Subject: Please Protect Desert Conservation Area from Expanded Mining Plan

Jurg Heuberger
Imperial County Planning & Development Service
801 Main St.
El Centro, CA 92243

Dear Jurg Heuberger,

Note, this is not a form letter. I have studied this issue and am adding my comment. I am a conservationist who does some gem minning and prospecting. I do not oppose most minning, however this issue is also about crucial water for people and the environs. Therefore, I am writing to oppose the proposed expansion of the U.S. Gypsum(USG) mine and wallboard production facility because is will result in unacceptable impacts to water resources upon which local communities and many native plants and wildlife depend. The proposed project would destroy public lands and natural values that are part of the California Desert Conservation Area (CDCA), which should be protected for generations to come.

The proposed project would allow excessive water extractions for wallboard production, which even USG admits would overdraft and destroy the water quality of the Ocotillo-Coyote Wells aquifer. This important aquifer provides the sole source of drinking water for local communities, but the draft Environmental Impact Report/Environmental Impact Statement fails to include a single viable alternative to avoid excessive impacts to it.

In addition, the proposed new well near the mine site would deplete aquifers and impact springs and other surface waters on public lands that are essential for the endangered Peninsular bighorn sheep, desert pupfish, and other native species. The proposed mine expansion and increased use of a narrow gauge rail line would also adversely impact public lands that provide essential habitat for the flat-tailed horned lizard, as well as air quality, traffic and visual resources of the area. None of these impacts were adequately addressed in the draft EIR/EIS.

The County and BLM must revise the proposed project and the draft EIR/EIS to include at least one alternative that will adequately protect the water and air quality and biological resources of this fragile desert environment. A revised draft EIR/EIS must also include additional information regarding the current environmental setting and impacts to plants and wildlife, water and air quality, traffic, and visual resources. Without meaningful and searching environmental review, the BLM and County cannot lawfully move forward with the approval process for the proposed mine expansion.

I urge the BLM and the County to keep in mind your duties to protect these fundamental and irreplaceable values - water, land and air - for all members of the public, native plants and wildlife, and future generations.

Sincerely,

Dan Close
Box 1018
arcata, California 95518-1018

Letter 34
Dan Close, July 13, 2006

Comment 34:

Response: Alternatives to the Project are addressed in Section 2.0 of the Draft EIR/EIS. See also General Response 4.3.4 and Responses to Comments 30-1 and 30-7 in the Final EIR/EIS.

Impacts to plants and wildlife are addressed in Sections 3.4 and 3.5 of the Draft EIR/EIS. The reader should also refer to General Responses 4.3.1, 4.3.2, and 4.3.3 of the Final EIR/EIS.

Air Quality is addressed in Section 3.6 of the Draft EIR/EIS and General Responses 4.3.6 of the Final EIR/EIS.

Traffic impacts were addressed in Section 3.11 of the Draft EIR/EIS.

Visual impacts were addressed in Section 3.7 of the Draft EIR/EIS. The reader should also refer to Response to Comment Letter 16, State of California, Department of Park and Recreation dated June 8, 2006 in the Final EIR/EIS.

Letter 35



Dave" <flietnerd@cox.net>
07/16/2006 04:25 PM

To <lself@ca.blm.gov>
cc <cburrascano@alerionbio.com>
bcc
Subject U.S. Gypsum

Dear Ms, Self:

U.S. Gypsum's proposed mining and wallboard production project would deplete aquifers and impact springs and other surface waters that are essential habitat for the federally endangered Peninsular bighorn sheep and desert pupfish. Take of these species is illegal under the Endangered Species act of 1973, as amended. In addition the project would impact public lands that provide essential habitat for native plants and animals.

The Bureau of Land Management must engage in a Section 7 consultation with the U.S. Fish and Wildlife Service to assure that this project would not jeopardize any endangered species.

David Flietner

Vice President, San Diego Chapter, California Native Plant Society

Letter 35
David Flietner, July 16, 2006

Comment 35:

Response: Comments noted. The Bureau of Land Management will engage in a Section 7 Consultation with U.S. Fish and Wildlife Service as required. The reader should also see General Responses 4.3.1, 4.3-2 and 4.3-3 of the Final EIR/EIS.

Letter 36

From: Lara Miranda [LMiranda@ChabotSpace.org]
Sent: Friday, July 14, 2006 11:31 AM
To: Jurg Heuberger
Subject: public comment opposing proposed US Gypsum mine & wallboard facility expansion.

To Whom it May Concern:

I am making a comment on the proposed expansion of the US Gypsum mine & wallboard production facility in southern California.

I strongly oppose the expansion of this mine. The cost to the rest of us, i.e. the "externalities" of degraded water quality, harm to wildlife and assorted other environmental damage make the acceptance of this mine expansion for a private company something little better than theft of the commons. The fact that the expansion would destroy a local aquifer, which local communities depend on, is in my mind something like a crime & should not be acceptable.

I am a frequent visitor to the desert areas of SoCal and do not wish to see further harm come to this ecosystem. Please do all you can to stop this expansion.

Thank you very much,
Lara C. Miranda
1032 47th st. #1
Emeryville, CA 94608

Letter 36
Lara Miranda, July 14, 2006

Comment 36:

Response: Comments noted. The potential impacts of the Project are addressed in the Draft EIR/EIR and Final EIR/EIS.

Letter 37

From: motoed@hotmail.com
Sent: Thursday, July 13, 2006 11:35 PM
To: Jurg Heuberger
Subject: Please Protect Desert Conservation Area from Expanded Mining Plan

Jurg Heuberger
Imperial County Planning & Development Service
801 Main St.
El Centro, CA 92243

Dear Jurg Heuberger,

I am writing to support the proposed expansion of the U.S. Gypsum (USG) mine and wallboard production facility.

The proposed project is good and should be supported.

I urge the BLM and the County to keep in mind your duties to protect our need for economic activity.

Sincerely,

Ed Stovin
7447 Salizar St
San Diego, California 92111

Letter 37
Ed Stovin, July 13, 2006

Comment 37:

Response: Comment noted. No response required.

Letter 38

From: kevin@swiftwriting.com
Sent: Monday, July 17, 2006 9:53 AM
To: Jurg Heuberger; lself@ca.blm.gov
Subject: What's mining got to do with pupfish?

Hello to both of you -

I hope this letter finds you well, and doing the very best you can for all of us. I rarely write letters to members of our public service organizations, and I suspect this one will never be read - but maybe, just maybe, I'm being entirely too cynical. I dearly hope so, because this letter comes straight from the heart, and offers an opportunity to do some good that only you can do.

The Center for Biodiversity sent me an action alert recently that I just got around to reading. I get a fair number of these every week, detailing the latest oncoming eco-catastrophe, and I have to admit, I've become a bit numbed to it all.

It's nearly impossible to respond to every plea for help you hear - be it a beggar on the street, a distant victim of some disaster, or even a member of your own family you're too busy to help for the moment. If we responded to every call on our time and resources, we'd have none left for ourselves. To remain effective, even functional, we have to pick and choose those we will help.

The default setting for this choice is always: 'who is closest to me and who do I care most about?'

I'm no different, except that some of those closest to me aren't people, but non-human family members- like the pupfish this mining expansion threatens.

Before you close this letter and dismiss it as hippie nonsense, consider this: the pupfish have survived more than 10,000 years of trials - changes in salinity, drought, species competition, excess heat, migratory pressure, and a host of different predators. So far, they have emerged victorious every time. These minnow-sized fish have an indomitable spirit, a drive that matches our own survival instinct, and I believe such a spirit deserves celebration.

Instead, we're preparing to wipe them out by stealing their water from underneath them, to destroy one more irreplaceable component of the Web of Life that engendered and supports all of us, human or otherwise.

It seems like a pitiful shame when we're prepared to exterminate a member of our family that has endured so much, just for the sake of profits.

Please, take the time to properly study the impact this project will have on a fragile desert ecosystem. Please abide by the laws governing your projects. Please give some thought to the world your children will inhabit.

And most of all, please take a moment today to really feel what extinction means. It is a loss that is FOREVER, that cannot EVER be healed or made right. It is the death of birth, the ending for all time of a fellow creature's irreplaceable genetic heritage.

Are our willing to commit genocide to keep your job, to make a buck, to 'progress' in the name of 'economic expansion'?

If you are, take a long look in the mirror.

Kevin Swift
kevin@swiftwriting.com
530-416-1907

January 21, 2008

5.0-461

U.S. Gypsum Final EIR/EIS

Letter 38
Kevin Swift, July 17, 2006

Comment 38:

Response: Impacts to desert pupfish are addressed in the Draft EIR/EIS in Section 3.5. The reader should also refer to the General Response 4.3.2 of the Final EIR/EIS.

Letter 39

Linda Self
BLM El Centro Field Office
1661 South 4th Street
El Centro, CA 92243

Dear Linda Self,

I am writing to oppose the proposed expansion of the U.S. Gypsum (USG) mine and wallboard production facility.

This expansion will have a greater negative effect upon our environment than any creation of jobs, or profits it would create if permitted. Water is more valuable than oil, and certainly more valuable than wall board. This proposal will bring about unacceptable impacts to water resources upon which not only local communities, plants and wildlife depend, it will impact the whole state as the once threat of global warming has now become a reality. Predictions for the future based upon scientific analysis are that the Sierra snowpack will be reduced by one third by 2050 and the capture rate of the water coming down not as snow melt but rain will be considerably less. Certainly it will call for more dams and water storage areas, not more water extraction. Due to Conservative's antipathy against taking actions to prepare for and lessen the effects of global warming we have already lost over twenty years to take corrective action. Considering what the Federal government's action in the past has already done to our rivers, to the Delta area, and to farmers who believed that the government would put in a drainage system for the Westlands, and the weakness of the present draft Environmental Impact Report, it is time for a change in the way the Federal Agencies react and put public interests before the private interests of the hidden nation within this nation Corporate America.

At a time that this nation is in deep financial debt, when we are having series of national disasters due to global warming, a huge bill coming up to pay for life time medical care for our veterans who are returning minus limbs and often suffering from mental problems due to stress, it is time to look at the real world as it exists today, and the science behind what lies ahead in the future. What is good for U.S. Gypsum is not particularly good for America, or California, which will pay the greatest price if this proposal goes through. It is time for the expansion of public service, not the time for the expansion of U.S. Gypsum. Please do an adequate Environmental Report and address the problems honestly. Thank you.

Sincerely,

BILL WELSCH
PO BOX 246
LEWISTON, California 96052

Letter 39
Bill Welsch

Comment 39:

Response: Comment noted.

Global warming is addressed in General Response 4.3.12 of the Final EIR/EIS.

FORM LETTER AND LIST OF COMMENTERS

**Table 5.0-3
List of Private Citizen Comments**

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
INDIVIDUALS		
1. Abela, Alice	Form Letter	
2. Acerro, Theresa	See Response	32
3. Agee, Jesse	Form Letter	
4. Allaback, Mark	Form Letter	
5. Allen, Laura	Form Letter	
6. Althiser, Kenneth	Form Letter	
7. Andrews, Alison	Form Letter	
8. Anshin, Judith	Form Letter	
9. Armstrong, Marilee	Form Letter	
10. Bach, Margaret	Form Letter	
11. Baker, Bryan	See Form Letter Response	
12. Barber, Janet	Form Letter	
13. Barber, Jennifer	Form Letter	
14. Barnes, John	Form Letter	
15. Barrows, Michael	Form Letter	
16. Bartl, Alan	Form Letter	
17. Baumann, Alan & Janet	Form Letter	
18. Baur, Saskia	Form Letter	
19. Beck, Connie	Form Letter	
20. Beck, Diane	Form Letter	
21. Becker, Sue	Form Letter	
22. Beer, Julie	Form Letter	
23. Behrakis, Deborah	Form Letter	
24. Belt, Annie	Form Letter	
25. Bennett, Edward L. & Mildred J.	Form Letter	
26. Bernardi, Nancy	Form Letter	
27. Berne, David	Form Letter	
28. Berry, Vanessa	Form Letter	
29. Bertles, Martha	Form Letter	
30. Beuchat, Carol	Form Letter	
31. Blumeneau, Audrey	Form Letter	
32. Bogert, Reid	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
33. Bolman, Diane	Form Letter	
34. Bolt, Mitchell	Form Letter	
35. Bond, Monica	Form Letter	
36. Bordenave, Michael	Form Letter	
37. Boren, Gary	Form Letter	
38. Bottorff, Ron	Form Letter	
39. Branch, Steve	Form Letter	
40. Breiding, Joan	Form Letter	
41. Brettillo, Joseph	Form Letter	
42. Brink, Kim F.	Form Letter	
43. Brinkerhoff, Aaron	Form Letter	
44. Britton, Kathryn	Form Letter	
45. Brooker, Catherine	Form Letter	
46. Brown, Daniel	Form Letter	
47. Brown, Jim	Form Letter	
48. Brown, Joel	Form Letter	
49. Brown, Michael	Form Letter	
50. Brown, Steve	Form Letter	
51. Brumbaugh, Diana	Form Letter	
52. Brussmann, Peter	Form Letter	
53. Burford, Martha	Form Letter	
54. Burk, Joyce	Form Letter	
55. Burns, Robert	See Response	33
56. Burns, Vicki	Form Letter	
57. Camarena, Megan	Form Letter	
58. Campbell, Alicia	Form Letter	
59. Campbell, Tomas	Form Letter	
60. Campbell, Velene	Form Letter	
61. Cant, John	Form Letter	
62. Carnahan, Walt	Form Letter	
63. Carroll, Jacqueline	Form Letter	
64. Carroll, Kathryn	Form Letter	
65. Carter, Marian	Form Letter	
66. Cass, Lorraine	Form Letter	
67. Cassidy, Margaret	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
68. Caudill, Rich & Maya	Form Letter	
69. Chacalos, Payton	Form Letter	
70. Chapman, Zoe	Form Letter	
71. Chermak, Douglas	Form Letter	
72. Chichlar, Gerald	Form Letter	
73. Chien, Benny	Form Letter	
74. Christiana, Verna	Form Letter	
75. Christianson, Steve	Form Letter	
76. Clark, Jason	Form Letter	
77. Clark, Sally	Form Letter	
78. Close, Dan	See Response	34
79. Cluster, Mike	Form Letter	
80. Cohen, Howard	Form Letter	
81. Comisar, Gerald	Form Letter	
82. Confectioner, Vira	Form Letter	
83. Conly, Leonard	Form Letter	
84. Conroy, Thomas	Form Letter	
85. Cooper, Richard	Form Letter	
86. Costa, Francisco	Form Letter	
87. Cottingham, Brian	Form Letter	
88. Counseller, Erik	Form Letter	
89. Cousins, Catharine	Form Letter	
90. Crawford, David	Form Letter	
91. Cunningham, Debra	Form Letter	
92. Dane, William	Form Letter	
93. Dapore, Wendy	Form Letter	
94. Davidson, Davy	Form Letter	
95. Dayton, RuthAnne	Form Letter	
96. De Costanzo, Danielle	Form Letter	
97. Denneen, Bill	Form Letter	
98. Denison, James	See Form Letter Response	
99. Denison, Joyce (June 6, 2002)	9b, 9d, 9h, 9i, 17	12
100. Denison, Michael (June 1, 2002)	9b, 9d, 9h, 9i, 17	13
101. Denison, Richard (June 6, 2002)	9, 9h, 9i, 15, 17	11
102. Dennis, Larry	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
103. Desilets, Michelle	Form Letter	
104. Dexter, Ken	Form Letter	
105. Diaz, Israel	Form Letter	
106. Diaz, L.	Form Letter	
107. Diaz, Marisa	Form Letter	
108. Dickinson, Rebecca	Form Letter	
109. Doe, Crosby	Form Letter	
110. Doman, Geoffrey	Form Letter	
111. Domingos, Ananda	Form Letter	
112. Doncaster, Jeane J.	Form Letter	
113. Downing, Steve	Form Letter	
114. Duncan, Mike	Form Letter	
115. Duquette, Thomas	Form Letter	
116. Easter, Margaret	Form Letter	
117. Ecoman, Brett	Form Letter	
118. Edwards, Dylan	Form Letter	
119. Eger, Grace	Form Letter	
120. Emerson, Linda	Form Letter	
121. Engle, Ned	No Response Required	
122. English, Roger	Form Letter	
123. Ennis, Karen	Form Letter	
124. Epperson, Diane (May 30, 2006)	9b, 9d	9
125. Erwin, Cherie	Form Letter	
126. Evans, Dinda	Form Letter	
127. Evans, James	Form Letter	
128. Fahlgren, Vivian	Form Letter	
129. Falberg, Gregory	Form Letter	
130. Feldman, Mark	Form Letter	
131. Field, Michael	Form Letter	
132. Fiklin, James	Form Letter	
133. Filipelli, DeBorah	Form Letter	
134. Fiore, Mark J.	Form Letter	
135. Fischer, Douglas	Form Letter	
136. Fisk, Linda	Form Letter	
137. Flietner, David	See Response	35

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
138. Fleming, Alan	Form Letter	
139. Floyd, Kim	Form Letter	
140. Foley, Fran	Form Letter	
141. Ford, Julie C.	Form Letter	
142. Fordice, John	Form Letter	
143. Fortner, Suzanne	Form Letter	
144. Foss, Janice	Form Letter	
145. Foster, Linda	Form Letter	
146. Fowlks, Dan	Form Letter	
147. Frappier, Alexandra	Form Letter	
148. Frasier, Forest	Form Letter	
149. Freedlund, Ali	Form Letter	
150. Frewin, Terry	Form Letter	
151. Frugoli, Greg	Form Letter	
152. Fullam, Peter	See Form Letter Response	
153. Gagomiros, Keith	Form Letter	
154. Galvin, Peter	Form Letter	
155. Gan, Monica	Form Letter	
156. Garber, Dennis	Form Letter	
157. Garcia, Christine	Form Letter	
158. Gardner, Kyle	Form Letter	
159. Garrels, Sharon	Form Letter	
160. Garrett, Katherine	Form Letter	
161. Garrett, Kelley	Form Letter	
162. Garvin, Michael	Form Letter	
163. Gaul, Ron	See Form Letter Response	
164. Gerratana, Carol	See Form Letter Response	
165. Gibson, James	Form Letter	
166. Gierson, Ellen	Form Letter	
167. Goggins, Alan	Form Letter	
168. Gooch, Nancy	Form Letter	
169. Gottesman, Judith	Form Letter	
170. Gottscho, Andrew	Form Letter	
171. Graham, Kimberley	Form Letter	
172. Grant, Linda	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
173. Greenberg, Corinne	Form Letter	
174. Greenblatt, Karl	Form Letter	
175. Gregor, Dorothy	See Form Letter Response	
176. Grenland, Dianne	Form Letter	
177. Griffith, Jeremiah	Form Letter	
178. Grobe, Nicola	Form Letter	
179. Guerreiro, Mike	Form Letter	
180. Hagen, Andrew	Form Letter	
181. Hagler, Douglas	Form Letter	
182. Hall, Robert	Form Letter	
183. Hamilton, Van & Lois	Form Letter	
184. Hampton, Susan	Form Letter	
185. Harkins, Joanne	Form Letter	
186. Harkins, Lynne	See Form Letter Response	
187. Harmon, Ben	Form Letter	
188. Harrington, Sue	Form Letter	
189. Harris, Victoria	Form Letter	
190. Hartwick, Nancy	Form Letter	
191. Haskins, Bill	Form Letter	
192. Hawthorne, Anne	Form Letter	
193. Hayes, Sara	Form Letter	
194. Healy, Patricia	Form Letter	
195. Hein, Claudia	Form Letter	
196. Heinzig, Dennis	Form Letter	
197. Henry, Lyle	Form Letter	
198. Hensley, Gordon	Form Letter	
199. Hidy, Ross	Form Letter	
200. Hill, Kirsten	Form Letter	
201. Hillery, Karie	Form Letter	
202. Hodges, Herman	Form Letter	
203. Hoffman, Jeff	Form Letter	
204. Hofman, Diana	Form Letter	
205. Holcomb, Susan	Form Letter	
206. Holmes Fatooh, Audrey	See Form Letter Response	
207. Holz, Dennis	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
208. Hoon, Daryl	Form Letter	
209. Hopkins, Thomas	Form Letter	
210. Huard, Nicholas	Form Letter	
211. Hubbs, Earl	Form Letter	
212. Huebner, Julie	Form Letter	
213. Hughes, Brendan	Form Letter	
214. Hughes, Nan	Form Letter	
215. Jacobs, David	Form Letter	
216. Jaeger, Diana	Form Letter	
217. Janson-Smith, Toby	Form Letter	
218. Jensen, Nancy	Form Letter	
219. Jessler, Darynne	Form Letter	
220. Johnson, Christina	Form Letter	
221. Johnston, Timothy	Form Letter	
222. Jones, Dayvid	Form Letter	
223. Jones, Kathleen	Form Letter	
224. Junak, Steve	Form Letter	
225. Kahn, Patricia	Form Letter	
226. Kandel, Cheryl	Form Letter	
227. Karlsson, Kent	Form Letter	
228. Karp, Michael	Form Letter	
229. Kaufman, I. Charles	Form Letter	
230. Kaufman, Kimberly	Form Letter	
231. Kaufman, Murray	Form Letter	
232. Kay, Joni	Form Letter	
233. Kelly, Carol	Form Letter	
234. Kennedy, Arthur	See Form Letter Response	
235. Kiger, Mary Ann	Form Letter	
236. Kimball, Charlotte	Form Letter	
237. Kirk, Keith	Form Letter	
238. Klein, Karin	Form Letter	
239. Klein, Leslie	Form Letter	
240. Klopp, Basey	Form Letter	
241. Klosterman, Peter	Form Letter	
242. Kotte, Merry Brook	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
243. Kraemer, Melissa	Form Letter	
244. Krakow, Jessica	Form Letter	
245. Kritzer, Sherry	Form Letter	
246. Kuelper, Carol	Form Letter	
247. Kulenovic, Minka	Form Letter	
248. Kummel, Julie	Form Letter	
249. Kutcher, Celia	See Form Letter Response	
250. Kwan, Mei	Form Letter	
251. Kwinter, Dave	Form Letter	
252. La Brie, Jon	Form Letter	
253. LaBrie, T.M.	Form Letter	
254. Laffey, John Kevin	Form Letter	
255. LaManna, Joseph	Form Letter	
256. Lange, Trent	See Form Letter Response	
257. Lariz, Mondy	Form Letter	
258. Laursen, Patti	Form Letter	
259. Lee, David	Form Letter	
260. Levine, Ross	Form Letter	
261. Lewis, Tryphena	Form Letter	
262. Lieber, Kurt	Form Letter	
263. Lilly, David	Form Letter	
264. Lin, Stephanie	Form Letter	
265. Linarez, Karen	Form Letter	
266. Linder, Lorin	Form Letter	
267. Linsley, Stephen	Form Letter	
268. Little, Eko	Form Letter	
269. Little, James	Form Letter	
270. Litvak, Jay	Form Letter	
271. Litwin, Julie	Form Letter	
272. Logsdon, Jimi	Form Letter	
273. Lotz, Elizabeth	Form Letter	
274. Lowell, Jacquie	Form Letter	
275. Lynch, Dennis	Form Letter	
276. Lynn, Georgia	Form Letter	
277. Lyons, James	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
278. Mack, Callie (July 14, 2006)	3, 9, 9b, 9d, 15, 16, 17	23
279. Mark, Marie	Form Letter	
280. Marshall, Ilona	Form Letter	
281. Marszal, Jeffrey G.	Form Letter	
282. Masarik, Charlotte	Form Letter	
283. Mason, Ken	Form Letter	
284. Matthews, Mark	Form Letter	
285. Maxwell, Jane	See Form Letter Response	
286. Mayer, Norman	Form Letter	
287. McAfee, Stephanie	Form Letter	
288. McClure, Roger & Judith	Form Letter	
289. McGowan, Cathy	Form Letter	
290. McKnight, Shoshanah	Form Letter	
291. McLaughlin, Janet H.	Form Letter	
292. Meier, Robert	Form Letter	
293. Meissner, Gregory	Form Letter	
294. Meril, Rick & Joan	Form Letter	
295. Merilatt, George	Form Letter	
296. Meyers, M.S.	Form Letter	
297. Miller, Jamie	Form Letter	
298. Miller, Laura	Form Letter	
299. Miller, Lee	Form Letter	
300. Miranda, Lara C.	See Response	36
301. Miranda, Luciana	Form Letter	
302. Mitchel, William	Form Letter	
303. Mitchell, Joyce	Form Letter	
304. Montoliu, Raphael	Form Letter	
305. Morris, Peter	Form Letter	
306. Morris, Todd	Form Letter	
307. Morris, Virginia	Form Letter	
308. Morrow, Mr. & Mrs. Jack L.	Form Letter	
309. Moser, Rich	Form Letter	
310. Mount-Sartor, Joanne	Form Letter	
311. Mundy, Kenneth	Form Letter	
312. Munoz, Jeanne	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
313. Munson, Jacob	Form Letter	
314. Murphy, J.	See Form Letter Response	
315. Murphy, Virginia G.	Form Letter	
316. Napier, Sabrina	Form Letter	
317. Neuhauser, Alice	Form Letter	
318. Nguyen, Thanh-Lam	Form Letter	
319. Nicodemus, Sharon	Form Letter	
320. Nogare, John	Form Letter	
321. Nogare, Susan	Form Letter	
322. Novotny, Michael & Sally	Form Letter	
323. O'Donnell, Kelly	Form Letter	
324. Ogella, Edith	Form Letter	
325. Olander, Chris	Form Letter	
326. O'Leary, Cathy	Form Letter	
327. Olin, Christopher	Form Letter	
328. Olin, Milton	Form Letter	
329. Olson, Tarin	Form Letter	
330. Omura, Kathy	Form Letter	
331. Orenstein, Susan E.	Form Letter	
332. O'Shea, Denis (July 11, 2006)	9, 9b	22
333. Painter, Elizabeth	See Form Letter Response	
334. Pan, Pinky Jain	Form Letter	
335. Parker, Angus M.	Form Letter	
336. Parker, Reece	Form Letter	
337. Parker, Ronald C.	Form Letter	
338. Parrish, Larry	Form Letter	
339. Patitz, Tatjana	Form Letter	
340. Patton, Carol	Form Letter	
341. Peer, William	Form Letter	
342. Pellicani, Andrea	Form Letter	
343. Penner, Marsha	See Form Letter Response	
344. Petersen, John	Form Letter	
345. Peterson, Janice	Form Letter	
346. Peterson, Morgan	Form Letter	
347. Pewthers, Cale	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
348. Pickering, Steve	Form Letter	
349. Pillsbury, Cheri	See Form Letter Response	
350. Polesky, Alice	Form Letter	
351. Pomies, Jackie	Form Letter	
352. Preston, Mar	Form Letter	
353. Price, Lynn	Form Letter	
354. Prola, Jim & Diana	Form Letter	
355. Proteau, Mary	Form Letter	
356. Pruitt, Richard	Form Letter	
357. Puga, Shirley	Form Letter	
358. Qualls, Mike	Form Letter	
359. Quong, Angela	Form Letter	
360. Rabens, Robin	Form Letter	
361. Ratcliffe, John W. & Joanne E.	Form Letter	
362. Raya, Art & Sharon	Form Letter	
363. Raymond, MariaElena	See Form Letter Response	
364. Reed, Cynthia	Form Letter	
365. Reed, Kristin	Form Letter	
366. Reed, Robert R.	Form Letter	
367. Reinberg, Don	Form Letter	
368. Remington, Stephanie	Form Letter	
369. Reyes, Fran	Form Letter	
370. Riddell, John	Form Letter	
371. Riley, Bill	Form Letter	
372. Ritter, Amy	Form Letter	
373. Robinson, Debra K.	Form Letter	
374. Robinson, Richard	Form Letter	
375. Robison, Anne	Form Letter	
376. Rocco, David	Form Letter	
377. Rochford, Dan	Form Letter	
378. Rojas, Teresa	Form Letter	
379. Root, Charlene	Form Letter	
380. Roper, Erik	Form Letter	
381. Rose, Barbara R.	Form Letter	
382. Rosen, Z'ava	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
383. Rousselot, Patrik	Form Letter	
384. Ruane, Catherine	Form Letter	
385. Rubin, Gene & Lorraine	Form Letter	
386. Rubin, Michael	Form Letter	
387. Russell, James	Form Letter	
388. Russell, Phyllis	Form Letter	
389. Sacco, Thomas	Form Letter	
390. Sahagun-Norte, Yolanda M.	Form Letter	
391. Salzman, Richard	Form Letter	
392. Saufley, Harold	Form Letter	
393. Saverio, R.	Form Letter	
394. Schlecker, Rose	Form Letter	
395. Schlegel, Ed	Form Letter	
396. Schleimer, Sylvia	Form Letter	
397. Schmitt, Richard	Form Letter	
398. Schneider, Anna	Form Letter	
399. Scholl, Florence	Form Letter	
400. Schuett, Greg	Form Letter	
401. Schulte, Dawne	Form Letter	
402. Schwick, Keplin	Form Letter	
403. Scott, Joan	Form Letter	
404. Scully, Patricia	Form Letter	
405. Senour, Jon C.	Form Letter	
406. Shapira, Susan	Form Letter	
407. Shapiro, Susan	Form Letter	
408. Shemwell, Misty	Form Letter	
409. Sheppard, Jacob	Form Letter	
410. Shields, Kelli	Form Letter	
411. Siegel, Kassie	Form Letter	
412. Silan, Sheila	Form Letter	
413. Silver, Jack	Form Letter	
414. Simon, Philip	Form Letter	
415. Simons, Anita	Form Letter	
416. Smallwood, Spencer	Form Letter	
417. Smith, Adam	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
418. Smith, Brian	Form Letter	
419. Smith, Dmitra	Form Letter	
420. Snyder, Renee	Form Letter	
421. Sondrini, Dennis O.	Form Letter	
422. Sonoda, Charlotte	Form Letter	
423. Sonoquie, Mo	Form Letter	
424. Sorenson, John F.	Form Letter	
425. Spenger, Constance	Form Letter	
426. Stadler, Scott	Form Letter	
427. Starks, Les	Form Letter	
428. Stearns, Geoffrey	Form Letter	
429. Steele, Mary	Form Letter	
430. Steinbach, Ann	See Form Letter Response	
431. Steiner, John	Form Letter	
432. Stephens, Josh	Form Letter	
433. Sternberg, Justin	Form Letter	
434. Stevens, Thomas N.	Form Letter	
435. Stewart, Dana L.	Form Letter	
436. Stewart, Glenn R.	See Form Letter Response	
437. Stillman, Jon	Form Letter	
438. Stoilov, Luben	Form Letter	
439. Stovin, Ed	See Response	37
440. Stowe, David	Form Letter	
441. Strauss, Howard	Form Letter	
442. Strickler, Jean	Form Letter	
443. Stringer, Lewis	Form Letter	
444. Strobel, Jeanine	Form Letter	
445. Stromberg, Mark	Form Letter	
446. Stuckey, Marci	Form Letter	
447. Suzuki, Mika	Form Letter	
448. Sweel, Greg	Form Letter	
449. Swift, Kevin	See Response	38
450. Taber, Lucile J.	Form Letter	
451. Taiz, Lee	Form Letter	
452. Talamo, Dave	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
453. Tankenson, Ethel	Form Letter	
454. Thomas, Dennis	Form Letter	
455. Thomas, Joseph	Form Letter	
456. Thomas, Kevin	Form Letter	
457. Thomas, Marilyn	Form Letter	
458. Thomas, William	Form Letter	
459. Thorburn, Linda	Form Letter	
460. Tiarks, Daniel	Form Letter	
461. Tisdale, Donna (May 24, 2006)		8
462. Tisdale, Donna (July 16, 2006)	1, 3, 9, 9b, 9d, 12c, 14a, 16b, 17, 18e, 18g	28
463. Tomczyszyn, Michael	Form Letter	
464. Tomlinson, Mike	Form Letter	
465. Torgan, Burt F.	Form Letter	
466. Torres, Luz	Form Letter	
467. Trapp, Gene R.	Form Letter	
468. Travis, Annabelle	Form Letter	
469. Triplett, Tia	Form Letter	
470. Turek, Gabriella	Form Letter	
471. Turner, Shirley	Form Letter	
472. Tyler, Steve & Jill	Form Letter	
473. Vaden, Marcia	Form Letter	
474. Van Bloemen, Dona	Form Letter	
475. Vandersloot, Jan D.	Form Letter	
476. Vandragt, Brady	Form Letter	
477. VanVoorhis, David	Form Letter	
478. Varga, John L.	Form Letter	
479. Varvas, Jason	Form Letter	
480. Velyvis, Stephen	Form Letter	
481. Voss, Randall	Form Letter	
482. Warenycia, Dee	Form Letter	
483. Warenycia, Paul	Form Letter	
484. Watt, Mark	Form Letter	
485. Watts-Rosenfeld, Susan	Form Letter	
486. Weatherman, John	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
487. Weaver, Judy	Form Letter	
488. Weaver, Kenneth	Form Letter	
489. Weeden, Noreen	See Form Letter Response	
490. Weikel, Wendy	Form Letter	
491. Weinberg, Amanda	Form Letter	
492. Weisz, Russell	Form Letter	
493. Welsch, Bill	See Response	39
494. Welsh, Deborah	Form Letter	
495. Werner, Scott	Form Letter	
496. Werninghaus, Karla	Form Letter	
497. Weyer, Linda	Form Letter	
498. White, Kat	Form Letter	
499. White, Michael	Form Letter	
500. Whitnah, Claudia M.	Form Letter	
501. Wikle, Victoria	Form Letter	
502. Wild, Kathryn	See Form Letter Response	
503. Wilder, Jenny	Form Letter	
504. Wiley, Carol	Form Letter	
505. Williams, Margie	Form Letter	
506. Williams, Mark	Form Letter	
507. Williams, Nicholas	Form Letter	
508. Wilson, Mary Ann	Form Letter	
509. Winslow, Lynda	Form Letter	
510. WinterSun, P-A	Form Letter	
511. Wisti, Mike	Form Letter	
512. Wolf, Rachel	Form Letter	
513. Wolfe, Gerry & Vicki	Form Letter	
514. Wood, Wendell	Form Letter	
515. Woodcock, Charlene	See Form Letter Response	
516. Woodcock, William E.	Form Letter	
517. Woods, James L.	Form Letter	
518. Worthy, Crista	Form Letter	
519. Wright, Pam	Form Letter	
520. Wright, Sharon	Form Letter	
521. Wuhrmann, Karin	Form Letter	

Commenter	Issues (Refer to Table 2.0-1 for Issue Description)	Response (Letter No.)
522. York, Mark	Form Letter	
523. Youhas, Sara	Form Letter	
524. Yuen, Lois	Form Letter	
525. Yurkovsky, Alexandra	Form Letter	
526. Zarkowski, De Ann	Form Letter	
527. Zivian, Anna	Form Letter	
528. Zukoski, Katie	Form Letter	

Standard Form Letter

Jurg Heuberger
Imperial County Planning & Development Service
801 Main St.
El Centro, CA 92243

Dear Jurg Heuberger,

I am writing to oppose the proposed expansion of the U.S. Gypsum (USG) mine and wallboard production facility because it will result in unacceptable impacts to water resources upon which local communities and many native plants and wildlife depend.

The proposed project would destroy public lands and natural values that are part of the California Desert Conservation Area (CDCA), which should be protected for generations to come.

The proposed project would allow excessive water extractions for wallboard production, which even USG admits would overdraft and destroy the water quality of the Ocotillo-Coyote Wells aquifer.

This important aquifer provides the sole source of drinking water for local communities, but the draft Environmental Impact Report/Environmental Impact Statement fails to include a single viable alternative to avoid excessive impacts to it.

In addition, the proposed new well near the mine site would deplete aquifers and impact springs and other surface waters on public lands that are essential for the endangered Peninsular bighorn sheep, desert pupfish, and other native species. The proposed mine expansion and increased use of a narrow gauge rail line would also adversely impact public lands that provide essential habitat for the flat-tailed horned lizard, as well as air quality, traffic and visual resources of the area. None of these impacts were adequately addressed in the draft EIR/EIS.

The County and BLM must revise the proposed project and the draft EIR/EIS to include at least one alternative that will adequately protect the water and air quality and biological resources of this fragile desert environment. A revised draft EIR/EIS must also include additional information regarding the current environmental setting and impacts to plants and wildlife, water and air quality, traffic, and visual resources. Without meaningful and searching environmental review, the BLM and County cannot lawfully move forward with the approval process for the proposed mine expansion.

I urge the BLM and the County to keep in mind your duties to protect these fundamental and irreplaceable values - water, land and air - for all members of the public, native plants and wildlife, and future generations.

Standard Form Letter Response

Opposition to the Project is noted.

The potential impacts of the Project are addressed in Section 3 of the Draft EIR/EIS. Specifically,

Water Resources Section 3.3

Native Plants Section 3.4

Wildlife Section 3.5

Public Lands Section 3.9

For more information regarding the Project's potential impacts on water resources, see General Responses 4.3.5, 4.3.6, 4.3.7, 4.3.8, and 4.3.9 in the Final EIR/EIS. For more information regarding the Project's potential impacts on plants and wildlife, see General Responses 4.3.1, 4.3.2, and 4.3.3 in the Final EIR/EIS.

Alternatives are addressed in Section 2 of the Draft EIR/EIS. See also General Response 4.3.4 and Responses to Comments 30-1 and 30-7 in the Final EIR/EIS.

6.0 Report Preparation

6.1 LEAD AGENCY STAFF

**Imperial County
Planning Department**
801 Main Street
El Centro, California 92243

Jurg Heuberger, Planning and Development Services Director

6.2 CONSULTANTS AND OTHER INDIVIDUALS INVOLVED IN THE PREPARATION OF THE EIR/EIS

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8.0 Glossary and Acronyms

8.1 GLOSSARY

active fault Fault with seismic activity recent enough so as to have displaced Holocene materials (up to 10,000 years old).

aggregate A hard, inert material composed of fragments that show a wide and gradational range in sizes, and which can be bound together into a coherent mass by means of a cementing material such as portland cement, gypsum plaster, or asphalt.

alluvial Pertaining to material or processes associated with transportation or deposition of soil and rock by flowing water (e.g., streams and rivers).

alluvial deposit Clay, silt, sand, gravel or other sediment deposited by the action of running or receding water.

alluvial fan An outspread, gently sloping mass of alluvium deposited by a stream flowing from a narrow canyon onto a plain or valley floor. Viewed from above, it has the shape of an open fan, the apex being at the valley mouth.

alluvium A general term for geologic materials deposited by running water (e.g., streams and rivers). The term applies to deposits of recent time that have not been consolidated and cemented into rock.

ancillary facilities Support structures and equipment.

Ammonium nitrate and fuel oil (ANFO), A slurry that is used as an explosive.

anticline A flow in the rock layer, generally upward, whose core contains the stratigraphically older rocks.

aquifer A body of rock that is sufficiently permeable to conduct groundwater and to yield economically significant quantities of water to wells and springs.

artifact Any object showing human workmanship or modification, especially from a prehistoric or historic culture.

Authority to Construct Written permit that must be obtained from the APCD prior to construction, alteration, or replacement of any article, machine, or equipment that may emit air contaminants or affect any emission of those contaminants.

bajada A sloping ground surface comprised of a series of merged alluvial fans.

bedrock A general term for the rock, usually solid, that underlies soil or other unconsolidated, bed material.

berm An elongate earthen structure that acts as a barrier; e.g., to make it difficult for a vehicle to cross, or to redirect the flow of water.

braided channel A stream that is characterized by random interconnected channels divided by islands or bars. Bars which divide the stream into separate channels at low flows are often submerged at high flow.

California Endangered Species Act (CESA) Legislation enacted in 1984 to protect floral and faunal species by listing them as "rare," "threatened," "endangered," or "candidate," and providing a consultation process for the determination and resolution of a potential adverse impact to the species.

California Environmental Quality Act (CEQA) Legislation enacted in 1970, as amended, to protect the quality of the environment for the people of California through requiring public agencies and decision makers to document and consider the environmental consequences of their actions.

channel A natural or artificial waterway of perceptible extent that periodically or continuously contains moving water. It has a definite bed and banks that serve to confine water.

channel morphology The physical shape, size and characteristics of a stream channel in relation to the hydraulic factors of velocity, roughness, flow and flow frequency.

clay Made of sediment particles that are classified according to size on scale in a range from coarse (0.004 to 0.0020 millimeters) to very fine (0.0005 to 0.00024 millimeters). See Table 8-1

cobbles Rock sediment particles that are classified according to size in a range from 256 to 64 millimeters. See Table 8.0-1.

cone of depression The depression produced in a water table or potentiometric surface by the withdrawal of water due to pumping.

contrast The effect of a striking difference in the form, line, color, or texture of the landscape features within the area being viewed.

convergence The state of tending to a unique solution. A given scheme is convergent if an increasingly finer computational grid leads to a more accurate solution.

cumulative effects The combined environmental impacts that accrue over time and space from a series of similar or related individual actions, contaminants, or projects. Although each action may seem to have a negligible impact, the combined effect can be significant. Included are activities of the past, present, and reasonably foreseeable future; synonymous with cumulative impacts.

cumulative impacts Two or more individual effects that, when considered together, compound or increase the impact.

deposition The mechanical or chemical processes through which sediments accumulate in a (temporary) resting place. The raising of the stream bed by settlement of moving sediment that may be due to local changes in the flow, or during a single flood event.

direct impacts Impacts that are caused by the action and occur at the same time and place (40 Code of Federal Regulations 1508.7); synonymous with direct effects.

discharge The discharge (Q) is the volume of a fluid or solid passing a cross section of a stream per unit time.

discretionary actions For the purpose of CEQA, these are actions or approvals by governmental agencies or boards that require the exercise of judgment or deliberation when making a decision to approve, deny, or approve with conditions a proposed project.

distributaries Diverging streams that do not return to the main stream, but discharge into another stream or the ocean.

**Table 8.0-1
Scale for Size Classification of Sediment Particles**

Class Name	Millimeters	Feet	PHI Value
Boulders	>256< -8	--	<-8
Cobbles	256 - 64	--	-8 to -6
Very Coarse Gravel	64 - 32	.148596	-6 to -5
Coarse Gravel	32 - 16	.074216	-5 to -4
Medium Gravel	16 - 8	.037120	-4 to -3
Fine Gravel	8 - 4	.018560	-3 to -2
Very Fine Gravel	4 - 2	.009279	-2 to -1
Very Coarse Sand	2.0 - 1.0	.004639	-1 to 0
Coarse Sand	1.0 - 0.50	.002319	0 to +1
Medium Sand	0.50 - 0.25	.001160	+1 to +2
Fine Sand	0.25 - 0.125	.000580	+2 to +3
Very Fine Sand	0.125 - 0.0625	.000288	+3 to +4
Course Silt	0.0625 - 0.031	.000144	+4 to +5
Medium Silt	0.031 - 0.016	.000072	+5 to +6
Fine Silt	0.016 - 0.008	.000036	+6 to +7
Very Fine Silt	0.008 - 0.004	.000018	+7 to +8
Coarse Clay	0.004 - 0.0020	.000009	+8 to +9
Medium Clay	0.0020 - 0.0010	--	+9 to +10
Fine Clay	0.0010 - 0.0005	--	+10 to +1 I
Very Fine Clay	0.0005 - 0.00024	--	+II to +12
Colloids	<0.000024	--	>+12

NOTE: Portions of Table 8.0-1 are taken from EM II 10-2-4000, March 1988

drainage Natural channel through which water flows at some time of the year. Natural and artificial means for effecting discharge of water as by a system of surface and subsurface passages.

drawdown The lowering of the water level in a well as a result of withdrawal; the reduction in head at a point caused by the withdrawal of water from an aquifer.

dust palliative A compound used to reduce fugitive dust. Dust palliatives include water, water/surfactant mixtures, emulsion compounds, etc.

effect Effect and impact are synonymous as used in this report. Direct or primary impacts are those caused by the project and occur at the same time and place. Indirect, or secondary, effects are those that result from the project and occur later in time or farther removed in distance or time, but are still reasonably foreseeable.

end-dumping The process of dumping material from the back of a dump truck. Overburden piles are constructed by backing a dump truck up on the top surface of a pile to the edge of the pile, and end-dumping the overburden over the side of the pile.

endangered species Any animal or plant species that is in danger of extinction throughout all or a significant portion of its range. Plant or animal species identified by the Secretary of the Interior as endangered in accordance with the 1973 Endangered Species Act (ESA) and ESA Amendments of 1982 and by CESA of 1984.

Endangered Species Act (ESA) Federal legislation enacted in 1973, as amended, that extends legal protection to plants and animals listed as "threatened" or "endangered" and includes consultation with USFWS.

environment The physical conditions that exist within the area that will be affected by a proposed project or alternative, including but not limited to land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance (CEQA §21060.5). The environment includes both natural and man-made conditions.

Environmental Impact Report (EIR) A detailed report prepared under CEQA describing and analyzing the significant environmental effects of a project and discussing ways to mitigate or avoid the effects. An EIR is prepared for use by the public, public agencies and agency decision makers to weigh the environmental consequences of a proposed action.

Environmental Impact Statement (EIS) An analytical document prepared under NEPA that portrays potential impacts to the human environment of a particular course of action and its possible alternatives. An EIS is prepared for use by the public, public agencies, and agency decision makers to weigh the environmental consequences of a proposed action.

ephemeral stream A stream or portion of a stream that flows briefly in direct response to precipitation in the immediate vicinity and whose channel is at all times above the water table. (Such flow is usually of short duration.)

erosion The wearing away of soil and rock by weathering, mass wasting, and the action of streams, glaciers, waves, wind, and underground water.

evapotranspiration The process by which water is returned to the air through direct evaporation or by transpiration of vegetation, with no attempt being made to distinguish between the two.

fault A surface or zone along which there has been displacement of the geologic materials on either side relative to one another as a result of seismic activity.

feasible Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors (CEQA §2106 1. 1).

federal land All classes of land owned by the federal government.

flake A flake is a remnant or chip of stone that indicates previous human activity.

floodplain The portion of a river valley, adjacent to the channel, which is built of sediments deposited during the present regimen of the stream and is covered with water when the river overflows its banks at floodstages.

fluvial Of or pertaining to rivers or produced by the action of a stream or river.

fluvial process The processes occurring in rivers and creeks.

fold A bend in bedding, foliation, cleavage, or other planar features in rocks. A fold is usually a product of deformation.

fugitive dust Dust particles suspended randomly in the air from road travel, excavation, and rock loading operations.

g The acceleration of gravity (32.2 ft/sec²).

game species Animals commonly hunted for food or sport.

geomorphology The shape of the earth's surface.

grain size See **particle size**.

gravel Fragments of rock larger and coarser than sand, worn by the action of air or water, 2 millimeters to 3 inches in size. See Table 8-1.

groundwater All subsurface water that is below the water table.

groundwater recharge Replenishment of groundwater by precipitation, runoff or by artificial methods.

growth media Geologic and organic materials, including soils, that are suitable for use in growing plants.

habitat The place where an animal or plant normally lives, often characterized by a dominant plant and codominant form, such as creosote bush habitat.

hardrock minerals Include copper, lead, zinc, magnesium, nickel, tungsten, gold, silver, bentonite, barite, feldspar, fluorspar, and uranium. They are not defined as "leasable minerals" (oil, gas, coal, oil shale, phosphate, sodium, sulfur, asphalt, or gilsonite) or "saleable minerals" (common variety of sand and gravel).

haul road A road used by large (50- to 100-ton capacity) trucks to haul ore and overburden from the open pit to other locations.

hazardous material Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, radioactive materials, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to

the environment if released into the workplace or the environment. (California Health and Safety Code, §2550 1).

heavy metals A group of elements, including copper, lead, mercury, molybdenum, nickel, cobalt, chromium, iron, silver, etc., that may be acquired by organisms in trace amounts that are toxic in higher concentrations.

Holocene The epoch of the Quaternary period of geologic time from 10,000 years ago up to the present.

hydraulic conductivity The capacity of a rock to transmit water. It is expressed as the volume of water at the existing kinematic viscosity that will move in unit time under a unit hydraulic gradient through a unit area measured at right angles to the direction of flow.

hydraulics The study and computation of the characteristics, e.g., depth (water surface elevation), velocity, and slope of water flowing in a stream or river.

hydrograph A graph showing, for a given point on a stream or conduit, the discharge, water surface elevation, stage, velocity, available power, or other property of water with respect to time.

hydrology The study of the properties, distribution, and circulation of water on the surface of the land, in the soil, and in the atmosphere.

impact A modification in the status of the environment brought about by the proposed action or an alternative.

in situ In (its original) place.

incise To cut down into or entrench.

incised Having a margin that is deeply and sharply notched.

infrastructure The basic framework or underlying foundation of a community or project, including road networks, electric and gas distribution, water and sanitation services, and facilities.

Initial Study A preliminary analysis prepared by the lead agency to determine whether an EIR or a Negative Declaration must be prepared or to identify the significant environmental effects to be analyzed in an EIR.

intermittent stream A stream that flows only part of the time or during part of the year.

intrusive Of or pertaining to the process and rock formed by the emplacement of molten rock material in preexisting rock.

irreversible Applies primarily to the use of nonrenewable resources, such as minerals, cultural resources, wetlands, or to those factors that are renewable only over long time spans, such as soil productivity. Irreversible also includes loss of future options.

jurisdictional wetlands A wetland area identified and delineated by specific technical criteria, field indicators, and other information for purposes of public agency jurisdiction. The public agencies that administer jurisdictional wetlands are the U.S. Army Corps of Engineers (ACE), the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (USFWS), and the U.S. Department of Agricultural Soil Conservation Service.

lead agency The public agency which has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment. (CEQA §21067).

local agency Any public agency other than a state agency, board or commission (CEQA §21062).

locatable minerals Minerals of metallic or other substances recognized by standard authorities and found in sufficient quantity and quality to justify their location under the mining law.

lode claim One of four types of mining claims, it is located for veins or lodes of quartz or other rock in place and may extend for 1,500 feet along the vein or lode and to a maximum of 300 feet on either side.

magazine A storage room for explosives. Magazines are built to specifications set by the Mine Safety and Health Agency (MSHA) and are usually located in a secure but remote area of the project site.

mass failure Unit downslope movement of a portion of the land surface, as in creep, landslide, or slip.

mass wasting The downslope movement of soil and rock material under the direct influence of gravity.

Maximum Contaminant Levels (MCLs) The drinking water standards defined by the State Drinking Water Act.

meandering stream An alluvial stream characterized in planform by a series of pronounced alternating bends. The shape and existence of the bends in a meandering stream are a result of alluvial processes and not determined by the nature of the terrain (geology) through which the stream flows.

metamorphism The mineralogical, chemical, and structural adjustment of solid rocks to physical and chemical conditions imposed at depth below the surface zones of weathering and cementation, which differ from the conditions under which the rocks originated.

mine Mine includes all mineral bearing properties of whatever kind of character, whether underground, or in a quarry or pit, or any other source from which any mineral substance is obtained.

mine pit Area from which ore and overburden are removed.

mineral materials Minerals such as common varieties of sand, stone, gravel, pumice, pumcote, and clay that can only be obtained under the Materials Act of 1947.

mineral permit Authorizes prospecting for certain leasable minerals on public lands described in the permit.

mineralization The process by which a valuable mineral or minerals are introduced into a rock.

mining The process or business of taking mineral substances from a pit, quarry or excavation in conjunction with other permitted construction activities.

mining claim A mineral entry and appropriation of public land under the Mining Law of 1872, as amended.

mining claim location Staking and reordination of a lode, or placer claim, millsite or tunnel site on public land.

mitigate/mitigation To cause to become less severe or harmful; actions to avoid, minimize, rectify, reduce or eliminate, and compensate for impacts to environmental resources.

mitigation A method or procedures that may: (1) avoid an impact altogether by not taking a certain action or parts of an action; (2) minimize impacts by limiting the degree or magnitude of the action and its implementation; (3) rectify the impact by repairing, rehabilitating, or restoring the impacted environment; (4) reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action; and (5) compensate for the impact by replacing or providing substitute resources or environments.

monitor to systematically and repeatedly watch, observe, or measure environmental conditions in order to track changes.

monitoring The collection of environmental, scientific, or engineering data by either continuous or periodic sampling methods.

morphology The shape of the earth's surface.

National Environmental Policy Act (NEPA) Legislation enacted in 1969, as amended, that requires federal agencies to include in their decision-making process: (1) appropriate consideration of all environmental effects; (2) procedures to avoid or minimize adverse effects; and (3) restore and enhance environmental quality as much as possible.

National Register of Historic Places (NRHP) A list, maintained by the National Park Service, of areas that have been designated as being of historical significance.

native species Plants that originated in the area in which they are found; i.e., they naturally occur in that area.

Notice of Intent Similar to the Notice of Preparation, is used to notify other agencies and the public that an EIS is being prepared under NEPA.

Notice of Preparation (NOP) A brief notice sent by the public agency with principal responsibility for carrying out or approving a project to notify other agencies that an EIR is being prepared under CEQA.

open pit operation. Surficial mining, in which the valuable rock is exposed by removal of overburden.

ore Rock that can be mined for extraction of a mineral commonly under conditions that allow a profit to be made.

outcrop The part of a geologic formation or structure that appears at the surface of the earth; also, bedrock that is covered by surficial deposits such as alluvium.

overburden Rock that contains either no gold or gold in quantities that cannot be economically extracted. Because such rock either lies on top of ore or is mixed in with the ore, overburden must be mined in advance of or at the same time as the ore is mined.

ozone (O_3) An end product of complex reactions between reactive organic gases (ROG) and (or non-methane hydrocarbons) and nitrogen oxide (NO_x) in the presence of ultraviolet radiation.

parameter Any set of physical properties whose values determine the characteristics or behavior of something.

particle size A linear dimension, usually designated as "diameter," used to characterize the size of a particle. The dimension may be determined by any of several different techniques, including sedimentation sieving, micrometric measurement, or direct measurement.

particulate(s) Minute, separate particles, such as dust or other air pollutants.

patent Government deed; a document that conveys legal title to public lands to the patentee.

patented claims Mining claims for which the United States government has conveyed the fee simple interest in the surface and minerals into private ownership.

permeability A measure of the relative ease with which a porous medium can transmit a liquid under a potential gradient; the property of a soil that permits the passage of water under a gradient of force.

permeable The property or capacity of a porous rock, sediment, or soil to transmit a liquid.

pH The measure of acidity or basicity of a solution.

phreatophyte A deep rooted plant that obtains its water from the water table or the soil layer just above it.

Placer claim One of four types of mining claims, it is located for all forms of deposits except veins of quartz or other rock in place; limited to 20 acres per individual or corporation, but up to 160 acres for an association of eight or more persons.

plan of operations As required by 43 Code of Federal Regulations 3809: Operators must submit plans of operation outlines to the Bureau of Land Management that include the name and address of the operator; location of the proposed area of operation; and information sufficient to describe the type of operation proposed, the type of roads, the means of transportation to be used, the period when the proposal will take place, and measures to be taken to meet the requirements for environmental protection.

potentiometric surface A surface that represents the total head in an aquifer; that is, it represents the height above a datum plane at which the water level stands in tightly cased wells that penetrate the aquifer.

prevention of significant deterioration (PSD) A term used to describe an air quality permitting process that is triggered by any project that has the potential to emit certain pollutants above levels prescribed by law.

project An activity that may cause either a direct physical change in the environs or a reasonably foreseeable indirect physical change in the environment, and which is any of the following: (a) An activity directly undertaken by any public agency, (b) an activity undertaken by a person that is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies, (c) an activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies (CEQA§21065).

pseudostatic analysis Static analysis of slope stability that incorporates a simulated horizontal force equal to the horizontal acceleration of the design earthquake times the mass of the potential sliding material.

pseudostatic factor of safety The ratio of forces contributing to slope stability (e.g., intergranular friction and cohesion) versus forces working against slope stability (e.g., gravity, seismic acceleration) for a simulated seismic load. A pseudostatic factor of safety equal to one indicates that these forces are equal and slope movement may occur.

public agency Any state agency, board, or commission; county, city, regional agency, public district, redevelopment agency, or other political subdivision (CEQA §21063).

public land Any land and interest in land owned by the United States within the several states and administered by the Secretary of the Interior through the Bureau of Land Management (BLM), without regard to how the United States acquired ownership, except: (1) lands located on the Outer Continental Shelf, and (2) lands held for the benefit of Indians, Aleuts, or Eskimos.

riverbed erosion Rivers that are cutting downward produce sediments by the development of canyons or valleys. The grain-size distribution of sediment contributed to the river is determined by the range in grain sizes composing the geologic material through which the river is incising and the transporting ability of the river.

Reactive organic gases (ROG), chemicals that are the precursors to the formation of ozone.

saturated zone Zone in which all the connected interstices or voids in rock or soil are filled with water under pressure equal to, or greater than, atmospheric pressure. The water table is commonly considered to be at the top of the zone of saturation.

saturation The degree to which voids in soil are filled with water.

seismic Pertaining to an earthquake or earth vibration, which may be natural or artificial.

seismicity Oscillation of the ground resulting from shifting of the earth's crust.

sensitive species Generic term for any plant or animal species that is recognized by the government as being depleted, rare, threatened, or endangered.

significant effect A substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

significant effect on the environment A substantial, or potentially substantial, adverse change in the environment (CEQA §21068).

soil erosion Movement of soil through the action of natural physical processes, primarily associated with the action of wind and water, from their position on the earth's surface. Soil erosion includes detachment, transport and subsequent deposition of soil particles.

soil horizon In a vertical section of land, the reasonably distinct upper layer of earth that may be dug or plowed and in which plants grow.

threatened species Species that, although not presently threatened with extinction, is likely to become endangered in the foreseeable future throughout all or a significant portion of its range in the absence of special protection and management efforts.

transpiration The process by which liquid water is taken up by a plant, then released to the atmosphere as a vapor at the surface of the plant.

unconfined aquifer The aquifer in which the water surface is free to move up and down.

unsaturated zone Zone in which the connected interstices or voids in a permeable rock are not filled with water and in which there can be movement of air. Generally, the zone between the land surface and the water table, but a zone of aeration can exist below an artesian aquifer, and below a perched body of water.

visual resource The composite of basic terrain, geologic features, water features, vegetation patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for viewers.

visual resource management classes A classification of landscapes according to the kinds of structures and changes that are acceptable to meet established visual goals (Bureau of Land Management designation).

waste rock See **overburden**.

water budget A quantitative system of accounting for sources, storage locations and losses of water in a basin.

water erosion Water erosion occurs when the intensity of rainfall exceeds the infiltration capacity of the soil, and overland flow is generated. In arid and semiarid regions, runoff and erosion are generated during storms over widespread portions of the landscape, producing largely silt- and sand-sized sediment. Surface erosion produces sand-sized and smaller sediments.

water table The level in the saturated zone at which the pressure is equal to the atmospheric pressure.

watershed The geographic region from which water drains into a particular stream, river, or body of water. A watershed includes hills, lowlands, and the body of water into which the land drains. Watershed boundaries are defined by the ridges or divides separating them. Also called a drainage area.

withdrawal Action restricting disposition of public lands and held for a specific public purpose.

8.2 ACRONYMS

ACEC	Area of Critical Environmental Concern
ACOE	Army Corps of Engineers
AF/Yr	Acre Feet per Year
ANFO	Ammonium nitrate and fuel oil
APN	Assessors Parcel Number
AQAP	Air Quality Attainment Plan
APCD	Air Pollution Control District
ARB	California Air Resources Board
ATC	Authority to Construct
BATC	Best Available Control Technology
BGEPA	Bald and Golden Eagle Protection Act
Bgs	Below ground surface
BLM	Bureau of Land Management
BMPs	Best Management Practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards

CARB	California Air Resources Board
Caltrans	California Department of Transportation
CalOSHA	California Occupational Safety and Health Administration
CBD	Center for Biological Diversity
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCR	California Code of Regulations
CDCA	California Desert Conservation Act
CDFG	California Department of Fish and Game
CDPA	California Desert Protection Act
CEQ	Council on Environmental Quality
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CIMIS	California Irrigation Management Information Systems
CIWMB	California Integrated Waste Management Board
CNDDB	California Natural Diversity Data Base
CO	Carbon Monoxide
CO ₂	carbon dioxide
CP Mill	Claudius Peters Mill
CUP	Conditional Use Permit (County land use permit)
DEHS	Department of Environmental Health Services
DOC/OMR	California Department of Conservation, Office of Mine Reclamation
DOI	U.S. Department of Interior
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ERCs	Emission Reduction Credits
ESA	Endangered Species Act
ET	evapotranspiration
F	Fahrenheit
FLPMA	Federal Land Policy and Management Act
FTHL	Flat-tailed horned lizard
FT ² /day	square feet per day
g	gravity
GHG	Greenhouse Gas
GIS	Geographic Information System
gpd	gallons per day
gpm	gallons per minute

GWP	global warming potential
I-8	Interstate 8
ICAPCD	Imperial County Air Pollution Control District
IID	Imperial Irrigation District
IMSA	Inert Material Storage Area
ITE	Institute of Traffic Engineers
LAFCO	Local Agency Formation Commission
LOS	Level of Service
MCE	Maximum Credible Earthquake
MCLs	Maximum Contaminant Levels
mg/L	milligrams per liter
MMBtu	Million British thermal units per hour
msf	million square feet
msl	mean sea level
MSHA	Mine Safety and Health Agency
M _w	Moment Magnitude
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO ₂	Nitrogen dioxide
NOA	Notice of Availability
NOP	Notice of Preparation
No _x	Nitrogen oxide
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
NSPS	New Source Performance Standards
NSR	New Source Review
NWIS	National Water Information System
O ₃	ozone
ONCAP	Ocotillo/Nomirage Community Area Plan
OSHA	Occupational Safety and Health Act
OHV	Off-highway Vehicle
Pb	Lead
pH	Hydrogen ion potential
PM _{2.5}	Fine Particulate Matter
PM ₁₀	Coarse Particulate Matter
PRISM	Parameter-elevation Regression on Independent Slopes Model
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
PTO	Permit to Operate

RCRA	Resource Conservation and Recovery Act
RO	Reverse Osmosis
ROD	Record of Decision
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SMARA	Surface Mining and Reclamation Act (State of California)
SO ₂	Sulfur Dioxide
SO _x	Sulphur Oxide
SSA	sole source aquifer
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
T&R	Township and Range
TDS	Total Dissolved Solids
TPH	tons per hour
TPY	tons per year
UP	Union Pacific
USFWS	United States Fish and Wildlife Service
USG	United State Gypsum Company
USGS	United States Geological Survey
V/C	Volume/Capacity Ratio
VDE	visible dust emissions
VOC	Volatile Organic Compound
VRM	Visual Resource Management
WA	Wilderness Area
WRI	Water Resources Investigation
WSA	Wilderness Study Area