

## Interim Measures No. 3, Land Area Use

DATE: July 8, 2005

### Introduction

Ongoing Topock cleanup activities include construction of a groundwater treatment system under the direction of the California Department of Toxic Substances Control (DTSC) as part of Interim Measure No. 3 (IM-3). In response to a request from tribal representatives, DTSC has asked Pacific Gas and Electric (PG&E) to estimate the area of land that has already or will be used in some manner<sup>1</sup> during construction of the groundwater treatment plant and associated pipelines, roadways, and wells. This memorandum provides an updated summary of the ground use associated with IM-3, including the analysis methodology and assumptions.<sup>2</sup>

Construction of IM-3 facilities commenced in late September 2004, and startup of operations is anticipated to begin no sooner than July 16, 2005, pending approvals by the county, state and federal regulatory agencies. Approval of IM-3 by the Bureau of Land Management (BLM) and DTSC was subject to conditions provided in separate biological and cultural resource assessments of IM-3 activities. In conformance with these conditions, pre-construction surveys of all areas subject to use during construction of IM-3 facilities were conducted. Under the terms of the BLM approval, all construction work was conducted in areas where significant cultural or biological resources are not present. In addition, appropriate physical barriers were placed and construction activities were continuously monitored by qualified professional staff to insure the protection of nearby cultural and biological resources.

### Methods Used to Measure Used Area

To assess the area of use associated with IM-3, a survey using Global Positioning System (GPS) technology was conducted to delineate the sub-areas subject to ground-use construction activities. Such activities include grading associated with the IM-3 treatment plant, staging area, injection wells, conveyance piping, monitoring wells, and access roads.

Various past activities have resulted in significant previous disturbance of the area where the IM-3 construction is occurring. The area is traversed by a major railway line, several gas pipelines, historic U.S. Route 66, and the National Old Trails Highway. Portions of the area were disturbed by a former gravel quarry, roadside debris piles, World War II era military training exercises, and a former roadhouse/restaurant adjacent to the IM-3 project site boundary. During design of the IM-3 facilities, much care was taken to utilize these previously disturbed areas wherever possible. Trenching was routed along existing roadways and pipeline right of ways. The treatment plant and staging area were located in

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<sup>1</sup> The significance of the term "use" for IM-3 means only that some activity has taken place over such land. It does NOT signify that any land has been harmed or that any other adverse effects on the land have occurred as a result of the activity.

<sup>2</sup> This memorandum was originally submitted on February 7, 2005. The updated summary of the ground use associated with IM-3 has been updated to reflect conditions at completion of construction in July 2005.

the area previously disturbed by gravel quarrying during the construction of the former U.S. Route 66 highway. To minimize disturbance of that historic roadway pursuant to the requirements of BLM, above-ground piping was installed to convey treated water from the treatment plant to the injection wells. As further protection of that resource, a fabric and gravel blanket was placed over the historic roadway – this blanket is not included as IM-3 construction use because it is mitigation and because the blanket is removable. In calculating the areas used by the IM-3 construction, previously disturbed ground was distinguished from ground that did not appear to be significantly disturbed previously.<sup>3</sup>

Data collected during the GPS survey data was imported into the geographic information system (GIS) maintained for the IM-3 project. Polygons were defined for each sub-area used as a result of IM-3 construction activities. In addition, polygons were defined for those areas determined to be previously disturbed. The acreage of each of the polygons was determined, and the total (net) area of use resulting from IM-3 was calculated by subtracting the previously disturbed acreage from the gross acreage used during IM-3 construction.

The assessment of IM-3 ground use also includes an estimate of use associated with IM-3 compliance monitoring wells. Four compliance monitoring wells were installed in the vicinity of the eastern injection well field. Access routes were provided to three of the four compliance monitoring wells. These are not constructed roadways, but rather just tracks of vehicles driving over the ground surface, but are included as “used area”. In addition, the area used for installation of a potential extraction well (PE-1) was calculated and included.

The attached table summarizes the total area of use related to IM-3. Sub-totals are provided for each sub-area associated with IM-3 (e.g., treatment plant site, staging area, injection well areas, etc.). The summary table provides sub-totals for private (PG&E) and public (BLM) lands to reflect land ownership. The total area used includes all areas used by the construction activities, regardless of the prior condition of the ground. Also shown in the table is the area of ground that did not appear to be significantly disturbed previously and which was used by the construction activities.

## **Conclusion**

The total area of use resulting from construction of the IM-3 facilities is approximately 8.0 acres. Of these 8.0 acres, approximately 3.9 acres are on ground that was previously significantly disturbed. Thus, the net area of ground which was used, and which did not appear to be significantly disturbed previously, is about 4.1 acres. Approximately 1.2 acre of such area is located on public (BLM) land and 2.9 acres are located on private (PG&E) land.

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<sup>3</sup> Land that did not appear to be previously disturbed may, in fact, have been significantly disturbed in the past, prior to the construction of IM-3.

<b>GROUND USE ASSOCIATED WITH IM-3</b>					
<b>IM-3 Sub-Area</b>	<b>Public Land</b>		<b>Private Land</b>		<b>Total Public &amp; Private Land</b>
	Total Area Used by IM-3 (acres)	Previously Undisturbed Ground <sup>1</sup> Used by IM-3 (acres)	Total Area Used by IM-3 (acres)	Previously Undisturbed Ground <sup>1</sup> Used by IM-3 (acres)	Previously Undisturbed Ground Used by IM-3 (acres)
West Mesa	NA	NA	0.57	0.33	0.33
East Mesa	0.15	0.11	1.28	0.84	0.95
Staging Area	NA	NA	0.95	0.16	0.16
Treatment Facility	NA	NA	1.11	0.38	0.38
Pipeline Trench <sup>2</sup>	1.91	0.84	0.89	0.51	1.35
Compliance Monitoring Wells and PE-1	0.37	0.22	0.72	0.72	0.94
<b>Total</b>	<b>2.43</b>	<b>1.17</b>	<b>5.52</b>	<b>2.94</b>	<b>4.11</b>

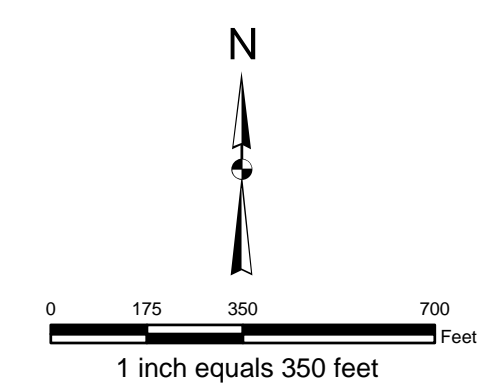
**Notes:**

NA – Not Applicable

1 – Does not include acreage affected by prior ground-disturbing activities unrelated to IM-3 (e.g., roadways, pipelines, etc.). Land noted as being “previously undisturbed” did not appear to be significantly disturbed at the time of the construction of IM-3, but, in fact, may have been subject to prior disturbance.

2 – The acreage calculation for the pipeline trench includes the area used during improvement of the eastern access road.





- LEGEND**
- Property Boundaries
  - Previously Disturbed Area
  - Area Used\* for IM-3

\*The significance of the term "use" for IM-3 means only that some activity has taken place over such land. It does NOT signify that any land has been harmed or that any other adverse effects on the land have occurred as a result of the activity.

Sources: San Bernardino County Assessor, Parcel quest, State Board of Equalization, Pacific Gas and Electric Company, and Plat maps provided by BLM.

**TOPECK IM3 PROJECT  
LAND USE MAP  
JULY 2005**  
PG&E TOPECK COMPRESSOR STATION  
NEEDLES, CALIFORNIA

