



STATE MINING AND GEOLOGY BOARD

SURFACE MINE INSPECTION GUIDELINE



This Guideline was developed by the State Mining and Geology Board with the cooperation of the Department of Conservation's Office of Mine Reclamation. This document recognizes that those who conduct surface mine field inspections will have specific professional expertise, but may not be fully knowledgeable in all facets of surface mine inspections, the requirements of the Surface Mining and Reclamation Act, and the Reclamation Standards contained in the California Code of Regulations. This Guideline is intended for use by Department and Board staffs in carrying out their lead agency responsibilities under Public Resources Code (PRC) §2774(b) of the Surface Mining and Reclamation Act of 1975 (SMARA) regarding the inspection of surface mines. The extent to which the Guideline is employed should be at the discretion of the individual inspector in addressing the circumstances particular to each mine site.

Inspection Date: CA Mine ID Number:

Mine Name (as reported on Annual Report)

Mine Contact Name Mine Contact Phone No.

Mine Coordinates: Latitude: Longitude:

Coordinates taken at: [ ] mine property entrance; [ ] other (describe)

SMARA Lead Agency: Contact Phone No.

Agency Contact Name and Title:

Reviewed/Inspected By:

1.0 PRE-MINE INSPECTION -- Prior to the commencement of the physical inspection of the mine site, the Inspector should perform the following familiarization process.

1.01 The Mine Inspection is to be performed in conformance with PRC §2774(b) within six months of receipt by the Department of Conservation (DOC) of the mining operation's Annual Mining Report. The Annual Mining Report is filed pursuant to PRC §2207, and the Inspector should obtain and review a copy of

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this Report prior to conducting the inspection. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [Ref. PRC §2207, PRC §2774(b)]

- 1.02** Prior to conducting the inspection, the Inspector should contact mine operator, owner, or agent that is listed on the Annual Mine Report and schedule a time for the inspection. It is important that a representative who is knowledgeable about the mine's operations be present during the inspection. In addition, a representative from the local lead agency should be invited to accompany the Inspector during the scheduled inspection. The inspection team should be limited to those individuals necessary to conduct the mine inspection. Document in a field book the notification of the scheduled inspection. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance]
- 1.03** The pre-inspection work-up should take note of any previously documented deficiencies or violations and determine the operation's current status with respect to any remedial actions or timetables to correct the deficiencies or violations. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance]
- 1.04** The mine record should be examined to determine if the mine is current in its reporting activities, and to determine if pertinent mine information or documentation are missing from the record or file, such as:
- A.** Has the operator paid the current Annual Reporting Fee? Is the Annual Mine Report filled out completely? Does information in the Annual Mine Report, filed by the operator, conflict or contradict information in the most recent Inspection Report. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [PRC §2207]
  - B.** Is the mine file complete? Prepare a list of any missing information and documents. Does the file contain proof of approval of the reclamation plan and financial assurance by the lead agency? [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [PRC §2207]
  - C.** Prepare a list of information that is missing from any records to be incorporated into the SMARA database and that can be obtained during the inspection activities. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [PRC §2207]
- 1.05** Review and document any outstanding or relevant issue(s) from the previous year's inspection report and from the correspondence file. These issues may include time tables for making corrections for cited deficiencies, pending changes in ownership, plans to expand the mine's operations or to reclaim

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specific lands, etc. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance]

**1.06** Thoroughly review the Reclamation Plan. Pay special attention to maps, figures, cross-sections, and photographs. Review any Conditions of Approval that may have been imposed by the lead agency during the approval process that relate to reclamation activities. These Conditions of Approval often specify requirements to which the mine must adhere during its operations; such requirements may include the maximum slope of temporary walls, the placement of product or waste material piles and elevations or volumes of those piles, the placement of benchmarks or other survey markers, proximity to and setbacks from property lines or other features, etc. Determine the approved end use of the mine site; is the end use clearly stated in the Reclamation Plan? [Consistency with Reclamation Plan]

**1.07** Review the local mining permit, if available and appropriate, to determine any end land use specifications in the permit that will have an impact on the physical design of the mine, such as set backs from property lines, entrance and exits to roadways, etc. The description of reclamation activities shall meet permit end land use specifications. [Consistency with Conditional Use Permit]

**1.08** Thoroughly review the current Financial Assurance Instrument and Amount, along with the previous year's Financial Assurance Cost Estimate (FAE). Determine if the current Financial Assurance Amount is in agreement with the last FAE. Determine if the Financial Assurance Instrument is still in effect, completed correctly on the approved form, or if it is about to expire. [Adequacy of Financial Assurance] [PRC §2773.1; 14CCR §3804]

If the FAE is not adequate (i.e. out of date or does not address all reclamation plan issues) and / or the Financial Assurance Instrument is not adequate (i.e. has not been updated, is on incorrect forms, incorrectly completed, etc.), note the areas of inadequacy and include them as possible deficiencies in the final inspection report. [Adequacy of Financial Assurance] [PRC §2773.1; 14CCR §3804]

**1.09** Obtain a recent base map, aerial photograph, or topographic map of the mine site showing the site's facilities for ease in mapping the conditions observed during the actual inspection. [Consistency with Reclamation Plan; Adequacy of Financial Assurance]

**1.10** The completed Inspection Report must be submitted to the Director of DOC within 30 days of the completion of the inspection. The completion of the inspection is the date that the analysis of the inspection data has been completed and incorporated into the final inspection report. [PRC §2774(b)].

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**2.0 MINE INSPECTION** -- During the conduct of the site inspection, it is recommended that the operator or the operator's representative that is familiar with the mine's characteristics and activities accompany the Inspector. As the inspection proceeds, the Inspector should ask the operator about any activities that the Inspector believes may not be in compliance with SMARA, or that appear to be new from the previous year's operations.

**2.01** Prior to commencing the mine inspection, the Inspector should perform the following activities:

- A.** Meet with the operator or the operator's representative at the site.
- B.** Introduce all members of the inspection party.
- C.** Explain the purpose and scope of the inspection.
- D.** Review the safety equipment requirements with the operator or the operator's safety officer for that mine.
- E.** Ask the operator for information on the mine's current activities (is the site idle, or is mining occurring, is blasting to take place, are trucks operating, etc.). Ask about any safety concerns about which the inspectors need to be aware.

[U. S. Department of Labor, Mine Safety and Health Administration]

**2.02** During the inspection, the following items should be observed and described. Any inconsistencies with the requirements of the Reclamation Plan should be noted. Photographs and physical measurements of the site and its features should be obtained whenever possible to document findings and the condition and appearance of the mine site, especially any conditions that may preclude reclamation of the site in accordance with the approved reclamation plan requirements. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [14CCR §3503]

- A.** Describe the location, including latitude and longitude from GPS. [PRC §2207]
- B.** Describe mine inspection activity; who was present, areas observed and why, and any areas that were not allowed to be observed, if applicable. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [14CCR §3503]
- C.** Restrictions to public access to the site (gates, fences, warning signs). [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance]
- D.** Observe and describe the current mining operation and mineral product. Identify any unique or relevant ore extraction characteristics not

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described in the Reclamation Plan that may impact the reclamation of the site. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance]

- E.** Are there any abandoned wells associated with the facility that will need to be reclaimed. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [14CCR §3713]
- F.** Observe and visually describe stability of any cut or fill slopes. Note the current slope configuration and conditions (e.g. are slopes clean or vegetated, do they have erosion rills or gullies, are slumps or slides apparent, etc.); do the slopes appear to be at the correct angles and heights as prescribed in the Reclamation Plan or Conditions of Approval; are the slopes supposed to be benched at specific intervals; what is the condition of the inter-bench slope stability. Based on the observed condition of the slope, should a licensed geologist or engineer be consulted to assess the long term stability of the slope; that is, might the present condition of the slope indicate that its approved final design as called for in the reclamation plan may not be achievable. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [14CCR §3704]
- G.** Observe and describe any water or sediment releases into the State's Waters. Note the presence and condition of any catchment basins and erosion control features. Describe any channel flow impediments. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [14CCR §3503(e); 14CCR §3706]
- H.** Observe and describe the condition, configuration, and characteristics of any mine waste piles and/or tailings piles. Describe any suspected contamination concerns. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [14CCR §3712]
- I.** Observe and describe the activities for soil salvaging and stockpiling for future reclamation operations. Check if signs are present indicating that the soil stockpile is for reclamation use only. Determine if the stockpiled soil is protected from erosive actions. [Consistency with Reclamation Plan; Adequacy of Financial Assurance] [14CCR §3711]
- J.** Observe and describe any reclamation activities that are concurrent with mining. Are these actions described as part of the phased reclamation activities in the Reclamation Plan. Inquire as to the extent of any reclamation actions that are proposed for the coming year. Do any of the areas designated in the reclamation plan require unique protection or special attention, such as to prevent adverse impacts to endangered

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species, waterways, etc. [Consistency with Reclamation Plan; Adequacy of Financial Assurance]

- K.** Determine if any backfilling of an excavation or the creation of a fill slope has occurred. Determine if the filling activity requires engineering designs or specifications or Permits as described in the approved Reclamation Plan. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [14CCR §3704]
- L.** Observe and describe any active revegetation pilot programs. Note if the revegetation programs are in accordance with the requirements of the Reclamation Plan, and if monitoring is occurring. Request copies of any monitoring data. [Consistency with Reclamation Plan; Adequacy of Financial Assurance] [14CCR §3705]
- M.** Observe and describe any naturally occurring revegetation. Observe the presence of any invasive species that is inconsistent with the approved Reclamation Plan. Based on observations, determine if a professional Botanist should be consulted. [Consistency with Reclamation Plan; Adequacy of Financial Assurance]
- N.** Observe and describe any sedimentation basins that will be left in place that are out of compliance with the Reclamation Plan. [Consistency with Reclamation Plan; Adequacy of Financial Assurance] [14CCR §3703]
- O.** Determine if previously cited deficiencies or violations have been corrected, partially corrected, or not addressed by the operator. It is recommended that the operator be informed of the Inspector's determination regarding the status of previously cited deficiencies or violation during the inspection. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [PRC §2774.1]
- P.** Determine if the observed operation and the physical condition of the mine site are in accordance with the requirements contained in the approved reclamation plan. If there are new deficiencies or violations observed, these should be documented and called to the attention of the operator during the inspection routine. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [PRC §2774.1]
- Q.** Determine if the existing FAE equates to the actual physical site conditions. Consider if the current Financial Assurance Amount is adequate to complete reclamation of the entire site if mining activities ceased operation at anytime within the coming year. Determine if the Financial Assurance Amount would adequately cover the remediation

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of any deficiencies or violations noted during the current inspection. [Adequacy of Financial Assurance] [PRC §2773.1; 14CCR §3804]

**R.** Are there any other observed and documented conditions that are related to another regulatory agency, such as some form of contamination or pollution. State law requires the Inspector to report within 48 hours possible violations of the law when observed. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance]

**S.** Sketch the mine's current development and conditions on a base map with annotations of findings. [Consistency with Reclamation Plan; Adequacy of Financial Assurance]

**2.03** Following the completion of the inspection tour, the Inspector should review the results and findings of the inspection with the operator or the operator's representative, and any lead agency personnel in attendance.

**3.0 POST MINE INSPECTION** -- This section specifies the steps necessary to secure the inspection information and prepare an inspection report for distribution.

**3.01** Return all field equipment, clean and in working condition. Any equipment malfunctions must be communicated to the appropriate personnel for repairs. [Department of Conservation policy]

**3.02** Process and evaluate field inspection information:

**A.** Enter GPS mine location coordinates into SMARA database and State Mine Base Map file. [Consistency with Reclamation Plan]

**B.** Evaluate and validate any SMARA mine records information collected and enter into SMARA database. [Consistency with Reclamation Plan]

**C.** Map mine information using facility GIS base map and plot location of photos. If GIS base map is not available, prepare a map from available database sources and other document file information [Consistency with Reclamation Plan]

**D.** Download or process pictures and prepare annotated photos (date, location, photo reference, and description of view). [Consistency with Reclamation Plan]

**E.** Review field data and notes and compile a one or two page Summary of Observations, Conclusions, and Recommendations. This summary should include any conversations with the mine operator or other local

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agency personnel on site during the inspection activities. Include a list of conclusions regarding the conformance of the mine operation with its Reclamation Plan and Financial Assurance requirements. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance]

- F.** Recommendations for proposed actions to correct observed deficiencies or violations should be made in the Summary. The recommendations may relate to proposed actions to be taken by the operator, or to further inspection activities by specialists. The recommendations may include the use of California licensed geologists or engineers to more thoroughly evaluate suspected problems dealing with slope stability issues or other geological or engineering issues; the use of botanists to investigate revegetation issues; and the use of any other specialists where the scope of concern may be outside the Inspector's particular expertise. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance]
- G.** Place a copy of the Summary into the mine file. [Department of Conservation]
- H.** Prepare a draft copy of the Surface Mining Inspection Report (form MRRC-1), and submit the form to an appropriate in-house reviewer for comments. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance][PRC §2774(b); Department of Conservation]
- I.** Prepare a draft SMARA Annual Mine Inspection Report containing a detailed description of the conditions of the mine, photographs, surveys and measurements, conclusions regarding the mine's condition and compliance with SMARA, and a list of recommendations to correct any deficiencies or violations. The Annual Mine Inspection Report should, also, address the adequacy of the current Financial Assurance Amount, and include any recommendations for revising the Amount. This Report should be submitted to an appropriate in-house reviewer for comments. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance][PRC §2774(b)]
- J.** Prepare and sign the Surface Mining Inspection Report Form MRRC-1 incorporating any reviewer comments for changes. Prepare and sign the Annual Mine Inspection Report, incorporating any reviewer comments for changes. [Consistency with Reclamation Plan; and, Adequacy of Financial Assurance] [PRC §2774(b)]

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**4.0 INSPECTION REPORT DISTRIBUTION** -- The Final Inspection Report Form MRRC-1 and the Annual Mine Inspection Report that includes photographs, cross-sections, maps and diagrams, survey measurements, reports by specialists (geologists, engineers, botanists, etc.), are to be sent to the following:

- Director, Department of Conservation
- Agent of Record for the Mine Operator
- Lead Agency (City, County, or SMGB)
- Office of Mine Reclamation Mine Files