

California Integrated
Waste Management Board

Site Investigation Sampling Plan

Sunset Cliffs Natural Park Burn Site
City Of San Diego, California

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1. Introduction

The California Integrated Waste Management Board (CIWMB) Closed, Illegal and Abandoned Site (CIA) program investigates solid waste disposal sites and provides site data and documentation to quantify requirements for both enforcement and potential clean-up activities by the CIWMB AB 2136 Solid Waste Cleanup Program (SWCP). Depending on the types of wastes at the site, intrusive investigation and environmental sampling may be necessary to determine if hazardous materials are present for the purpose of defining the scope of enforcement and remediation work or referral to either the Regional Water Quality Control Board (RWQCB) or the Department of Toxic Substances Control (DTSC).

The CIWMB has determined that intrusive investigation and environmental sampling are necessary to determine both chemical characteristics of the waste and its horizontal and vertical extents in order to provide the property owner with alternatives for removal and disposal or closure in place. This Site Sampling Plan (SSP) outlines the proposed investigation methods and analyses to characterize the waste at the Sunset Cliffs Natural Park Burn Site. Statutory authority for investigating solid waste disposal sites is provided in the California Public Resources Code (PRC) Section 45013, ET seq.

This SSP describes the work that will be performed to characterize and determine the limits of the waste at the site. This SSP is divided into five (5) sections, including this introduction. Section 1 provides the known site background information and Section 2 describes the project objectives. Section 3 describes the proposed analytical methods and Section 4 describes the site sampling strategy. Section 5 describes required documenting and reporting procedures/protocols.

1.1. Site Location and Description

The Sunset Cliff Natural Park Burn Site is located in an erosional wash approximately 60 feet south of the intersection of Ladera and Cordova Streets in Sunset Cliffs Natural Park, San Diego, California (See Figures 1 through 3). County of San Diego Assessor's Parcel Number (APN) 532-251-01500 further identifies the property. The area to be investigated is identified in Figure 2.

1.2. Project Background

The Sunset Cliffs Natural Park Burn Site was discovered during a beach clean up event in 1990. According to the March 17, 1990, Archaeological Site Record filed by RECON with the California Department of Parks and Recreation, the burn site contains early twentieth century household items and may be associated with the activities of the Theosophical Society of America.

The Society's leader, Madame Katherine A. Tingley, established Point Loma Universal Brotherhood and Theosophical Society Homestead, popularly known as Lomaland, on approximately 132 acres of Point Loma in 1897 and eventually moved its international headquarters from New York City to the area in 1900. At the height of its activity, the Point Loma community had a preschool for three to five year-olds, primary and secondary schools, the Raja-Yoga School, a university, a School of Antiquity, a scientific research department, a school of music supporting a full orchestra, string quartet, choral groups, and a program of drama complete with a Greek theater.

In 1945, Colonel Arthur L. Conger was recognized as leader of the Theosophical Society. He closed the Esoteric Section of the Society and moved the International Headquarters of the Society to Pasadena, California. There remain several areas within the park that contain refuse materials from the Society's activities.

1.3. Project Purpose

The objective of this investigation is to determine the vertical and horizontal extents of the waste and identify the waste characteristics. A backhoe will be utilized to excavate through the cover and waste into native soil at specified locations (see Figure 4, Sample Location Map). During trenching activities, waste/soil samples will be collected to conduct analyses to determine possible contamination. After the extents have been determined and samples have been collected, the trenches will be backfilled, making sure to, as much as possible, cover all wastes that were unearthed. The trench data and the analytical results will allow for the determination of compliance with State Minimum Standards for gas control, adequacy of cover material, drainage, erosion control, and site security. In addition, the data collected will allow the City of San Diego LEA and Parks and Recreation to determine if additional cover is needed, if the waste needs to be consolidated or reconfigured, or if clean closure of the disposal site is appropriate.

1.4. Responsible Agency

CIWMB staff will be responsible for preparing the site sampling plan and coordinating investigation objectives with the LEA, the City of San Diego Parks and Recreation, the City of San Diego Environmental Services Department (ESD) and CIWMB's environmental consultant, Ninyo & Moore. CIWMB staff will prepare and coordinate the site investigation, oversee field investigation activities, collect waste/soil samples for analysis, and prepare the final site investigation report. Copies of the draft site investigation report will be provided to the LEA, ESD and Parks and Recreation for review and comments. All parties will receive copies of the final site investigation report. CIWMB staff will also place both the site investigation work plan and final report in CIWMB files and update the Solid Waste Information System (SWIS) database.

1.5. Project Organization

The project will be coordinated and managed by the CIWMB project manager, Mr. Brad Penick. The CIWMB's Health and Safety Section will coordinate on-site Health and Safety and air monitoring under the direction of Mr. Penick. As lead on the project, Mr. Penick may be reached at the California Integrated Waste Management Board, 1001 "I" Street, P.O. Box 4025, Sacramento, CA 95812 or by calling (916) 341-6357.

CIWMB staff will collect the waste/soil samples, package and label the samples, and ship the samples to the CIWMB contracted laboratory, Excelchem Environmental Laboratories, Inc (Excelchem) of Roseville, CA. Excelchem will provide the sampling containers, labels, chain-of custody forms, and laboratory analysis for the samples. CIWMB staff will also photographically log the sampling locations.

The CIWMB's CIA Section Environmental Services Consultant, Ninyo and Moore will notify Underground Service Alert (USA) of the investigation and subcontract for an extended-reach backhoe or excavator and 40-hour Hazardous Waste Operations (HAZWOPER) trained operator and provide a field geologist for to direct excavating, document trench activities, soil classification and trench logging. Ninyo and Moore will also subcontract for a professional surveyor to survey the disposal site and the trench locations. Ninyo and Moore will use this data to generate a trenching location map, trench log figures and cross section maps.

This dump site (archaeological site P-037-24618) may be associated with the Theosophical Society building complex. The Society was established by Madame Tingley on Point Loma during the early part of the 20th century. There are several areas within the park that contain refuse materials from the Society's activities. Consequently archeological monitoring during the trench excavation will be performed.

ESD will contract ASM Affiliates to provide archaeological monitor during the earth-moving phase of the project. The material recovered from the trenches will be collected, washed, cataloged, and analyzed. Artifacts will be curated at the San Diego Archaeology Center. A report will be prepared addressing the significance of the archaeological deposit, and making recommendations for stabilization of the deposit and preservation in place, or additional artifact recovery if appropriate. Features will be cleared, recorded, and evaluated for significance. Archaeological deposits, or, more likely, historic deposits (such as trash pits or scatters) will be documented and subjected to evaluation and potentially to data recovery mitigation.

A biological survey was performed at the site that identified predominately non-native species of chrysanthemums, *Mesembryanthemum*, and *Carpobrotus*. Native species include a large patch of lemonade berry, covered in *Marah macrocarpus*, several patches of *Encelia californica*, a small amount of *Artemisia californica*, a single individual of annual bulb (not yet identified), and a native thorny shrub, possibly the rare plant *Adolphia californica*. A very small amount of *Opuntia prolifera* occurs on the site. Other native shrubs and a large stand of *Opuntia* occur west of the site.

Although the only sensitive plant noted onsite was the shrub that may be *Adolphia*, the surrounding area and this habitat type in general often support rare plants. Consequently biological monitoring during the site assessment will be performed.

ESD will provide a Biologist on site to identify and stake native and sensitive habitat within the project area. Trenching locations will be adjusted to minimize impacts to these areas. After trenching, ESD will provide mulch, and CIWMB's subcontractor will spread it for erosion control and to minimize the introduction of additional exotic species as suggested in the biological survey.

1.6. Previous Investigations

The site was first identified by an Archaeological Site Record which was submitted the California Department of Parks And Recreation by RECON of San Diego, CA on September 17, 1990. This document is included as Appendix B.

In addition, Ms. Lisa Wood, Biologist, performed a biological survey for the City of San Diego ESD on April 30, 2003 in which she identified a thorny shrub that may be the rare native plant *Adolphia californica*. Ms. Wood also stated that since the site and the surrounding area make up a habitat type that often supports rare plants, the trenching should be limited as much as possible to areas supporting non-native species of plants. She also recommended that the areas not to be disturbed be visually marked before the trenching occurs to limit the disturbances and that mulching should be done after the project is completed. Ms. Wood's *Site Visit Report* is included as Appendix C.

It is the understanding of the CIWMB that no previous Phase I or Phase II site investigations have been performed at this site. The City of San Diego LEA has performed limited analysis on samples collected from the suspected disposal area. A copy of the results of these analyses is provided in Appendix D of this SSP.

2. Project Objective

2.1. Data Collection

A backhoe or excavator will be used to conduct the site investigation which will evaluate: 1) disposal site cover thickness, if any, and characteristics, 2) the horizontal and vertical extents of the waste, 3) physical and chemical characteristics of the waste for comparison to regulatory thresholds.

Sampling will be conducted in accordance with applicable portions of California Code of Regulations, Title 22, section 66261.10 et seq. for characterizing hazardous waste. The CIWMB will use applicable regulatory levels by the California Department of Toxic and Substance Control and applicable federal levels to evaluate and characterize the buried waste. Detailed analytical procedures are specified in Section 3.9 of this plan.

Future remedial alternatives may include clean closure or waste reconfiguration, therefore it will be necessary to evaluate if the buried wastes or portions of the wastes are classified as non-hazardous, California hazardous, or RCRA wastes for handling and disposition. Representative samples will be collected during and/or following completion of excavating activities and submitted for analytical testing.

2.2. Project Tasks

CIWMB staff will perform a preliminary radiological site survey prior to the trenching activities. Sampling will be conducted using authoritative sampling protocols. Sampling will entail the use of a backhoe or excavator trenching through the cover, if any, and waste down to native soil. CIWMB staff anticipates that approximately 11 trenches will adequately define the horizontal and vertical extents of the waste (see Figure 4, Sample Location Map). Samples will be collected from waste/ash that, based on visual observations and olfactory conditions, are likely to contain the highest concentrations of contaminants. Samples will also be collected from the native soil under the waste/ash to evaluate the downward migration of contaminants. Up to two background sample locations will be determined in the field by CIWMB staff. The background sample(s) will be collected in native soils away from the disposal site. Sampling activities are scheduled to occur the week of June 16, 2003.

2.3. Expected Data

Based on the previous limited sampling event performed by the LEA and investigations at other burn dumps throughout the State of California, CIWMB staff expects to find elevated concentrations of metals, particularly lead and zinc. Lead concentrations will typically exceed state standards and be below the federal limit for lead. The CIWMB expects to find non-detect to low levels of total recoverable petroleum hydrocarbons (TRPH) and semi-volatile organic compounds (SVOCs). The dioxins and furans are expected to range from non-detect levels to background levels or slightly above background levels. The pH in the waste/ash is expected to range from 6.0 to 9.0. If staining is observed, then petroleum hydrocarbons and volatile organic compounds (VOCs) may be present.

Although unlikely, low-level radioactive materials (e.g. old pottery, radium pocket watches, and other assorted radium items) may also be encountered.

3. Analytical Methods

A representative number of samples will be sent to a laboratory where they will be analyzed for corrosivity (pH), California Assessment Manual (CAM) 17 metals Total Threshold Limit Concentration (TTLC) procedures, CAM 17 Soluble Threshold Limit Concentration (STLC) procedures, RCRA Eight Metals using the Toxicity Characteristic Leaching Procedure (TCLP). Samples, which demonstrate the highest concentrations for lead according to the methods described above, will be analyzed again using the Lead Deionized Water (DI)-WET test. Select samples (at least five samples) will also be analyzed for dioxins and furans, polychlorinated biphenyls (PCBs), total recoverable petroleum hydrocarbons (TRPH), semi-volatile organic compounds (only poly-nuclear aromatic hydrocarbons (PAHs)). In addition, other methods may be selected depending on visual and olfactory conditions such as petroleum hydrocarbons, volatile organic compounds (VOCs), chlorinated herbicides, organochlorine pesticides, and organophosphorous pesticides.

3.1. Analytes of Concern

The primary analytes of concern in the burned waste are lead and zinc. Elevated concentrations of mercury, copper, chromium, beryllium, barium, and arsenic may also be present.

3.2. Analytical Methods

The sampling team will corroborate with the specified laboratory on holding times, detection limits, quality objectives, and sample volume before collecting samples. To characterize the burned waste, the following test methods will be required for each sample:

- Corrosivity (pH), *EPA Method 9045C – Non Aqueous*
- CAM 17 Metals (Sb, As, Ba, Be, Ce, Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Ti, V, Zn) TTLC, *EPA Method 6010B/7471A*
- CAM 17 Metals (Sb, As, Ba, Be, Ce, Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Ti, V, Zn) STLC, *EPA Method 6010B/7471A, Title 22 Wet Extraction*
- TCLP RCRA Metals (Ag, As, Ba, Cd, Cr, Hg, Pb, Se), *EPA Method 6010B*

The samples, which demonstrate the highest concentrations for lead according to the analysis described above, will be analyzed again for:

- Lead DI-WET, *EPA Method 6010B*

The following test methods will be required for at least five of the samples collected:

- Semi-VOCs (PAHs only), *EPA Method 8270C*
- Dioxins and Furans, *EPA Method 8290*
- PCBs, *EPA Method 8082*
- TRPH, *EPA Method 418.1*

Depending on site conditions the following test methods may also be selected:

- VOC with 5 gram EnCore™ samplers, *EPA Method 8260B*
- Chlorinated Herbicides, *EPA Method 8151A*
- Organochlorine Pesticides, *EPA Method 8081A*
- Organophosphorous pesticides *EPA Method 8141A*

3.3. Anticipated Cost

Based on discussions with the analytical laboratory the following sampling costs are proposed:

Method	Parameter	Unit Cost	Number	Cost
EPA 9045C	pH	\$10.00	15	\$150.00
EPA 1010	Ignitability	\$20.00	15	\$300.00
EPA 6010B/7471A	CAM 17 Metals TTLC	\$110.00	15	\$1,650.00
EPA 6010B/7471A, Title 22 WET Extraction	CAM 17 Metals - STLC	\$160.00	15	\$2,400.00
EPA 6010B	TCLP Metals (RCRA 8)	\$140.00	15	\$2,100.00
EPA 6010B	Lead DI-WET	\$70.00	15	\$1,050.00
EPA 8280	Dioxins and Furans	\$600.00	5	\$3,000.00
EPA 8270C	Semi-VOCs, (PAHs Only)	\$120.00	5	\$600.00
EPA 8082	PCBs	\$80.00	5	\$400.00
EPA 418.1	TRPH	\$40.00	5	\$200.00

TOTAL \$11,850.00

Notes:

Cost provided by Excelchem Environmental Laboratories of Roseville, California.

3.4. Field Quality Control

As burned waste/ash is inherently heterogeneous, no field duplicate samples will be required. Up to two background samples will be collected as a measure of naturally occurring analyte concentrations. No other field quality control will be required.

3.5. Laboratory Quality Control

To provide for quality control of the analytical results, the following measures will be taken:

- All sample analyses will be conducted by a certified hazardous waste laboratory;
- The laboratory will be certified in the analytical method requested; and
- The laboratory will follow industry standard quality assurance and quality control methods.

The analytical laboratory will perform Quality Control (QC). At a minimum the QC will include project specific QC, method blank results, laboratory control spike, and matrix spike results.

1. Project Specific QC – No project specific QC has been requested by the CIWMB
2. Method Blank Results – A method blank is a laboratory-generated sample that assesses the degree to which laboratory operations and procedures cause false-positive analytical results for the CIWMB samples. The method blank results associated with the samples will be included with the analytical results.

3. Laboratory Control Spike – A Laboratory Control Spike (LCS) is a sample that is spiked with known analyte concentrations, and analyzed at approximately 10 percent of the sample load in order to establish method-specific control limits. The LCS results associate with CIWMB samples will be attached on the LCS and LCS Duplicated Analysis Report.
4. Matrix Spike Results – A matrix spike is a sample that is spiked with known analyte concentrations and analyzed at approximately 10 percent of the sample load in order to establish method-specific control limits. The matrix spike results associated with CIWMB samples will be attached on the Matrix Spike and Matrix Spike Duplicate Analysis Report.
5. Accuracy – Accuracy will be measured by percent recovery as defined by:

$$\% \text{ Recovery} = \frac{(\text{measured concentration}) \times 100}{(\text{actual concentration})}$$

4. Sampling Plan

This sampling plan is intended to document the procedural and analytical testing program for this and any subsequent sampling events performed to collect soil and waste samples and to characterize areas of potential contamination from the site. This plan was compiled after reviewing the US Environmental Protection Agency's, Region 9, guidance document "Instructions for the One-time Sampling Event Sampling and Analysis Plan" dated March 1998 and previous CIWMB sampling results.

4.1. Sampling Methodology

Discrete sampling and analytical testing will be used to characterize the burned ash and surrounding soils. The sampling will be accomplished using either a backhoe or a track excavator. Representative samples will be collected directly from the trench excavations, from the backhoe/excavator bucket, or from spoils piles using trowels or using the sample containers directly. The samples will be screened for methane using a GMI 422 Gas Surveyor instrument and screened for radioactivity using CIWMB radiation survey equipment. Following screening, the sample will be logged by the sampling team, noting sample depth, location, and any contacts between cover soil and waste, or between waste and underlying native soils. Any municipal solid wastes encountered will not be sampled for analytical testing; rather they will be visually classified and recorded on trench logs.

Sample depths and locations will be based on visual observations of subsurface materials. If the wastes in the trench excavations are observed to be debris or municipal solid wastes not conducive to sampling and analytical testing, then soil samples will be collected from layers (if present) within these wastes and/or a soil sample will be collected directly underlying these wastes. Burned waste, if encountered will be sampled. CIWMB field personnel will perform sampling. Following completion of trench-related activities, the excavated materials will be placed back into the trench in approximately the reverse order that they were removed.

4.2. Sampling Procedures

Prior to and during sampling, radiological surveying will be conducted using CIWMB survey equipment. Any surface areas, pits, or spoils with elevated radiation readings (i.e., 5 to 10x background) will be noted on the field map and may be evaluated by the CIWMB. If radiation readings exceed 100 times background levels, the United States Environmental Protection Agency (US EPA) will be notified, and no further work will be conducted until the US EPA has conducted a more detailed radiological survey.

The sampling team will collaborate with the specified analytical laboratory on holding times, detection limits, quality objectives, and sample volumes before collecting samples. Samples will be collected at locations selected by the CIWMB project manager based on visual and olfactory inspection of the waste areas. The exact number of samples to be analyzed and the analytical testing program will depend upon the number and size of waste areas and sample volumes required for analytical methods. Up to two background samples will be collected at locations that show no visible evidence of burned waste and are significantly away from the waste areas. Samples will be collected in each contiguous waste area. Debris (e.g. white goods, concrete, rocks, construction waste, and tires) will be removed prior to sampling.

4.2.1. Volatile Organic Procedures

If it is determined that VOC analysis is necessary, then these samples will be collected first. The VOC samples will be obtained from *in situ* soils by using an impact sampler and brass sleeve or an Encore™ soil sampler. A sample-dedicated trowel will be used to remove and discard a thin layer of soil. Next the impact sampler or the Encore™ soil sampler will be driven in a tight cluster from the cleared area. After the sampler is full, it will be sealed, screened for radiation, chilled and processed for shipment to the laboratory.

4.2.2. All Other Procedures

Waste and soil samples will be collected directly from the backhoe/excavator bucket, from the trench if it is shallow enough to safely enter (less than 2 feet in depth) or from the spoils piles using decontaminated or sample-dedicated trowels and either brass sleeves or Teflon-lined glass jars. The sample will be immediately sealed, labeled, screened for radiation and placed in a chilled cooler for transport to the analytical laboratory. At the completion of sampling activities, the sampling team will transport or arrange for the transport of the selected samples to the analytical laboratory for analyses using strict chain-of-custody protocols.

4.3. Sampling Equipment

The following equipment and materials will be necessary to perform the sampling:

- Backhoe or track excavator
- Brass sleeves
- Teflon sheeting
- Plastic end caps
- Eight-ounce wide-mouth glass sampling jars
- Disposable stainless steel trowels
- Sealable plastic storage bags
- Spray paint for marking sample locations
- Surveying stakes or lath & surveying tape
- Hammer or mallet
- GMI 422 Gas Surveyor Instrument
- Dosimeter® Radiation pager
- Handheld GPS unit
- Ballpoint pens
- Chain of custody forms and custody seals
- Level C and Level D personal protective equipment (Tyvek®, tape, inner & outer gloves, booties, respirators with HEPA filter)
- Daily Field Reports
- 5 gallons of deionized/distilled water
- 500 mL of 0.1 N nitric acid in a labeled spray bottle (Note: only necessary if using equipment that requires decon)
- Decontamination equipment (5-gallon buckets, 2 ½-gallon sprayer, non-phosphate detergent, disposable brush, paper towels, cotton towels, visqueen)
- First aid kit and eye wash
- Mailing labels, waterproof, permanent markers
- Cooler and ice or blue ice
- Packing tape and duct tape
- Field log book and labels

4.4. Sample Location

Based on site reconnaissance and review of limited available background data, trench locations have been tentatively selected and are represented on the Sampling Location Map, Figure 4. At the discretion of the CIWMB project manager, authoritative protocol may be used to determine the actual trench and sampling locations in the field. Exact trench and soil sampling locations will be determined in the field based on accessibility, safety, and ability to fulfill the project objectives. The approximate trench location, size, identification, and orientation will be recorded in the field on an appropriate site map, and the location will be staked in the field when sampling is completed. A sketch of the sample location may be entered into the logbook or site map and any physical reference points will be labeled. If possible, distances to the reference points or GPS locations will be recorded. A map showing the trench and sample locations will be provided in the final report.

4.5. Sample Containers and Preservation

New or pre-cleaned containers will be provided by the analytical testing laboratory and will not be rinsed prior to sample collection. Since only solid samples will be collected, no preservative will be added to the containers.

4.6. Decontamination Procedures

All equipment that comes into contact with potentially contaminated soil or burned waste will be decontaminated in a pre-designated area. Disposable equipment intended for one-time use will not be decontaminated, but will be packaged for appropriate disposal. Decontamination will occur prior to and after each use of a piece of equipment. The sampling team will decontaminate all reusable sampling devices used. The sampling team will be required to change their gloves between each sampling event.

The following decontamination procedures will be followed to address the primary contaminant (i.e. metals):

1. Non-phosphate detergent and tap-water (bottled water) wash, using a brush if necessary
2. Tap-water rinse
3. 0.1 N nitric acid rinse
4. Deionized/distilled water rinse twice

4.7. Disposal of Residual Materials

In the process of collecting environmental samples at the Sunset Cliffs Natural Park Burn Site, the CIWMB and its Consultants/Contractors will generate different types of potentially contaminated investigation-derived waste (IDW) that may include:

- Used personal protective equipment (PPE);
- Disposable sampling equipment; and
- Decontamination fluids

The U.S. EPA's National Contingency Plan requires management of IDW generated during sampling comply with applicable or relevant and appropriate requirements to the extent practicable. The IDW will contain soil; burned/partially burned refuse and solid wastes. These wastes are not considered hazardous and will be disposed of at a municipal landfill. Used PPE and disposable equipment will be double bagged and placed in a municipal refuse dumpster. Prior to disposal, used PPE and disposable equipment will be rendered inoperable. Decontamination fluids that will be generated during sampling will consist of nitric acid, deionized water, residual contaminants, and water with non-phosphate detergent. The volume

and concentration of the decontamination fluids will be sufficiently low to allow disposal at the site or sampling area. The water with detergent will be poured onto the ground. The nitric acid will be diluted and tested with pH paper before pouring onto the ground.

5. Documenting and Reporting

5.1. Field Notes

CIWMB staff will use a Daily Field Report or a field logbook to document the vital project and sample information. At a minimum, the following information will be chronologically recorded:

- Each sample location and surficial feature of interest, (waste piles, structures, etc.) will be uniquely identified, described, photographed, and include GPS coordinates. This information will be recorded on the Daily Field Reports and on the site map;
- Sampler's name(s);
- Date and time each trench excavation is completed;
- Date and time of sample collection;
- Designation of sample as composite or grab;
- Type of sample collected (soil, sediment, water, air);
- Type of sampling equipment used;
- Field instrument readings, if applicable;
- Field observations and details related to analysis or integrity of samples (e.g., weather conditions, noticeable odors, colors, etc.);
- Preliminary sample descriptions;
- Sample preservation;
- Sample identification numbers and explanatory code; and
- Name of recipient laboratory.

In addition to the sampling information, the following specific information will also be recorded in the daily field reports:

- Project team members and their responsibilities;
- Any visitors to the site;
- Arrival and departure times of all personnel and equipment associated with and/or visiting the site;
- Deviations from the site sampling plan and rationale; and
- Level of health and safety protection.

5.2. Photographs

Photographs will be taken at each trench, sampling location and at surrounding areas. The photographs will verify information entered in the field logbook. Each photograph taken will be written in the logbook with the approximate time, date and location.

5.3. Labeling

All samples will be labeled in a clear and precise manner to ensure proper identification for tracking in the laboratory. Each sample will be assigned a unique sample identification number, which will reference the sample location. In addition, each sample label will include general sample location information, sample collection date and time, and the initial of the person collecting the sample.

5.4. Chain-of-Custody

A chain-of-custody record will be completed by CIWMB staff and shall accompany all sample shipments. Shipped samples will have a custody seal placed across the lid of each sample container. All custody seals will be signed and dated.

5.5. Packaging and Shipment

All sample containers will be placed in an appropriate strong-outside shipping container with the drain plug sealed, if applicable, to prevent melted ice from leaking out of the container. If ice is used to cool the samples, the ice will be packed in a double sealable storage bag. Special care will be provided to secure and prevent damage to the sample containers.

5.6. Reporting

Following receipt of the analytical data, CIWMB and Ninyo & Moore staff will evaluate and summarize project data/information onto appropriate figures and tables. CIWMB staff will prepare a site investigation report providing descriptions of the field procedure/methodologies utilized, descriptions and physical characterization of buried wastes, estimated extent of buried wastes, an estimate of the volume of waste, a summary of analytical data, and discussion of the analytical results. The CIWMB anticipates submitting the site investigation report to the LEA 60 days after receipt of the analytical results.

FIGURES

APPENDIX A
Site Specific Health
And Safety Plan

APPENDIX B
Archaeological Site
Record CA-SDI-11784

APPENDIX C
April 30, 2003, Site Visit
Report By Lisa Wood, Biologist

**SITE VISIT REPORT
BY LISA WOOD, BIOLOGIST.**

SITE VISIT DETAILS. April 30, 1:45 till 2:30. Lisa Wood and Sylvia Castillo. The site is an old burn ash site at Ladera and Cordova Street in the Sunset Cliffs area, with dark burn soil and broken bottles evident on the soil surface. The weather was fine and many pelicans and other sea birds were out, as well as lizards, terrestrial birds, and small mammals.

PROJECT DESCRIPTION. At this point no project has been defined other than testing. The CIWMB is willing to do the necessary trenching to determine the extent and nature of the deposited materials. As explained below, this can be accommodated with almost no impact to native species. Depending on the analysis from planning staff, it is possible that no permits will be required during the testing phase. The master plan for the area and the actual cleanup will both require review for appropriate permits and CEQA analysis.

BIOLOGY OBSERVED. The site has some completely bare areas, but is dominated by the non-native chrysanthemum that is a pest in coastal areas. This species is doing very well this year, probably because of the good rains we have had. Other parts of the site are dominated by the troublesome non-native *Mesembryanthemum*, a species that causes the surface of the soil to become hyper-saline. A small patch of *Carpobrotus* and other non-natives were noted.

Native species include a large patch of lemonade berry, covered in *Marah macrocarpus*, several patches of *Encelia californica*, a small amount of *Artemisia californica*, a single individual of annual bulb that I have not yet identified (they were common offsite), and a native thorny shrub, possibly the rare plant *Adolphia californica*. A very small amount of *Opuntia prolifera* occurs on the site. Other native shrubs and a large stand of *Opuntia* occur west of the site.

Although the only sensitive plant noted onsite was the shrub that may be *Adolphia*, the surrounding area and this habitat type in general often support rare plants. On another site I previously worked on, located just to the east, large stands of *Ceanothus verrucosus* were present. Maritime succulent scrub is an extremely rare and limited habitat type, typically supporting dudleyas, golden bush, and species with narrow distribution. The habitat type is extremely sensitive and requires utmost care.

RECOMMENDATIONS: The trenching necessary to determine the nature of the fill should occur as much as possible in areas supporting non-native species. Because of the prevalence of non-natives, accomplishing this should not pose problems. Impacts to a small amount of common encelia or lemonade berry may be necessary to get a complete idea of the substrate, but if they are kept to a minimum, these two species are likely to come back quickly. I recommend that the areas not to be disturbed be flagged ahead of time to ensure no disturbances. The site is small, and the area vegetated with native species represents only a small portion of the site, so this can be accomplished quickly and completely. After the trenching, I recommend mulching should be done using a good quality product to minimize introduction of additional exotic species while controlling erosion.

After trenching has determined the extent and content of the fill material, alternatives for handling the material, such as removing or capping and other alternatives must be developed and coordinated with the Sunset Cliffs master plan. At that point, impacts to the native species must be evaluated, and methods to avoid, minimize, and mitigate impacts developed.

APPENDIX D
Laboratory Analytical Results For
City Of San Diego LEA's December 12, 2002
Limited Sampling Event