



Environment,
Health, and Safety
BERKELEY LAB

ENVIRONMENTAL SERVICES

Import Fill Plan for Lawrence Berkeley National Laboratory

Revision: 02

August 2026

Prepared by:

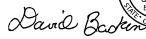
Environment, Health, and Safety Division

Environmental Services Group

Review and Approval

Import Fill Plan for Lawrence Berkeley National Laboratory
Revision: 02 August 2026

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Abbreviations and Acronyms

AB	aggregate base
ASTM	American Society for Testing and Materials
Berkeley Lab	Lawrence Berkeley National Laboratory
BMPs	best management practices
CAP	RCRA Corrective Action Process
CARB	California Air Resources Board
CDF	controlled density fill
COPC	chemical of potential concern
CY	cubic yards
DOE	United States Department of Energy
DTSC	California Department of Toxic Substances Control
EDD	electronic data deliverable
ELAP	Environmental Laboratory Accreditation Program
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
ESG	Environmental Services Group
ESL	Environmental Screening Level
FAC	LBNL Facilities Division
IFB	indistinguishable from background
LBNL	Lawrence Berkeley National Laboratory
MDL	method detection limit
NOA	naturally occurring asbestos
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PG	Professional Geologist
PIMD	LBNL Project & Infrastructure Modernization Division
Plan	Import Fill Plan
Rad SMP	<i>Radiological Soil Management Plan</i>

RCRA	Resource Conservation and Recovery Act
RL	Reporting Limit
RSL	EPA Regional Screening Level
SFRWQCB	San Francisco Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
SL	DTSC Screening Level
SME	Subject Matter Expert
SMP	<i>Soil Management Plan</i>
SVOCs	semivolatile organic compounds
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
TPH	total petroleum hydrocarbons
UC	University of California
UCL	Upper Confidence Limit
VOCs	volatile organic compounds

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Record of Revisions

Revision	Date	Description
2*	August 17, 2026	Added a Record of Revisions log. Updated reference citations and listings.

* The Record of Revisions entries for revisions 0 and 1 of this document were not recorded. However, these revisions are available upon request from the EWRP Technical Editor.

1 Introduction

1.1 Purpose

Lawrence Berkeley National Laboratory (Berkeley Lab, LBNL) is a scientific research campus operated by the University of California (UC) for the U.S. Department of Energy (DOE). It is located on an approximately 200-acre parcel of UC Regents' land in the East Bay Hills in Alameda County, California, straddling the border between the cities of Berkeley and Oakland. A map showing the locations of LBNL buildings, creeks, and surface topography is provided on Figure 1.

This Import Fill Plan (Plan) has been prepared to support LBNL projects that may require the use of imported fill. It provides the requirements and specifies the process for assessing the environmental quality and acceptability of fill imported from an off-site location to be used at Berkeley Lab.

Compliance with the requirements of this Plan helps ensure that materials transported from off-site sources to Berkeley Lab for use as backfill in excavations or as fill for grading or landscaping do not adversely affect human health or the environment and are handled, stored, and used on-site in accordance with applicable laws, regulations, and LBNL policies.

1.2 Plan Application

Berkeley Lab has embarked on a long-range program to redevelop older areas of Berkeley Lab that contain outdated and/or seismically unsound buildings and replace them with modern research facilities. Older infrastructure, such as sanitary sewer and storm drain lines, is also being removed and/or replaced. The following activities, as well as routine maintenance and minor construction projects, may require the use of imported fill:

- Removing building foundations and subsurface utilities and structures
- Excavating contaminated soil
- Backfilling excavations
- Grading/filling sites
- Replacing old and installing new subsurface utilities
- Landscaping

Although soil excavated on site may be acceptable for reuse as on-site fill, a sufficient volume of acceptable material may not be readily available when needed to meet a project's needs.

With a few limited exceptions described in this Plan, fill material must be evaluated prior to import to assess its environmental acceptability for use at Berkeley Lab. The criteria to assess whether fill material is environmentally acceptable are dependent on a number of factors, including the source location and land use history (e.g., virgin quarry or industrial site), the type of material (e.g., rock, soil, or concrete), concentrations of chemicals and radiological elements of potential concern in the material, and the

planned use of the material. This Plan specifies the criteria required for those factors for the material to be considered acceptable for import and use at Berkeley Lab.

Requirements of this Plan do not apply to the on-site reuse of soil excavated at Berkeley Lab. Those requirements are specified in the *Soil Management Plan* (SMP) and the *Radiological Soil Management Plan* (Rad SMP). The requirements also do not apply to the use of controlled density fill (CDF).

Requirements for CDF should be provided as a project specification or in a project document.

This Plan has been prepared to assess fill only from an environmental perspective and therefore does not specify constructability-related geotechnical requirements such as density, particle size distribution, compaction, consolidation, and shear strength. Geotechnical requirements are specified in Berkeley Lab's Facilities Master Specifications Section 312323 – *Backfilling* (available for download at <https://facilities.lbl.gov/service/engineering/engineering-services-directory/masterspec-download/>). For imported fill to be acceptable for use at Berkeley Lab, it must meet both the environmental requirements specified in this Plan and any geotechnical requirements for its intended use, including those contained in Master Specification 312323.

1.3 Requirements Applicable to Import Fill at Berkeley Lab

Requirements applicable to fill imported to Berkeley Lab are discussed below. Updates/revisions to the requirements and any new requirements will be assessed by the Subject Matter Expert (SME) of LBNL Environmental Services Group (ESG) and, if applicable, will be incorporated into revisions to this Plan.

As part of the Resource Conservation and Recovery Act (RCRA) Corrective Action Process (CAP) at Berkeley Lab, the California Environmental Protection Agency (EPA) Department of Toxic Substances Control (DTSC) required Berkeley Lab to prepare and submit an SMP for its review and approval. The SMP prepared and updated by Berkeley Lab establishes policies and procedures to ensure that soil excavated at Berkeley Lab does not adversely affect human health or the environment and is handled, stored, reused on site, or disposed of off-site in accordance with applicable laws, regulations, and LBNL policies.

Requirements for the management of radiologically contaminated soil at Berkeley Lab are under the jurisdiction of DOE. Requirements specific to radiological contamination are therefore not governed by the SMP but are provided in the Rad SMP. The Rad SMP details the multistep process required to assess and manage soils that are potentially affected with radiological contamination in accordance with DOE requirements. To be protective of human health and the environment and comply with DOE and DTSC requirements, potentially chemically or radiologically affected import soil must also comply at a minimum with relevant requirements of the SMP and Rad SMP.

The following regulatory guidance documents were also used to identify requirements potentially applicable to this Plan:

- DTSC *Information Advisory Clean Imported Fill Material Fact Sheet* (DTSC, 2001) (<https://dtsc.ca.gov/information-advisory-clean-imported-fill-material-fact-sheet/>)

- *Interim Guidance Naturally Occurring Asbestos (NOA) at School Sites* (DTSC, 2004)
(https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/09/SMBRP_POL_Guidance_Schools_NOA.pdf)

1.4 Key Terms

Aggregate. Coarse particulate material used in construction, including sand, gravel, crushed stone, or quarry rock. Aggregate base (AB) is used as a base course in roadways, cement pads, and foundations and as backfill for underground utilities.

Backfill. Material used to refill an excavation. As in placing “back” the fill. This applies to the fill placed back for a utility excavation, the material behind a retaining wall, and so forth.

Commercial Vendor. A vendor whose prime business consists of selling soil, rock, or landscaping material.

De Minimis Import Fill Project. A project requiring 10 cubic yards (CY) or less of imported fill material. *De minimis* projects do not require sampling if the fill meets other requirements specified in this Plan. Larger projects may not be divided into smaller *de minimis* projects to avoid the import evaluation requirements of this Plan.

Fill. Material placed where previously there was no material, as in the grading of the site where lower elevations are raised to higher elevations.

Import Fill. Material received from sources outside Berkeley Lab that is placed on site and compacted to fill in a depression or hole in the ground (i.e., backfill) or create mounds or otherwise artificially change the grade or elevation (i.e., fill). Import fill generally consists of soil, rock, crushed rock, or gravel. For this Plan, landscape material is also included under the definition of fill.

Indistinguishable from Background (IFB). The detectable concentration of a radionuclide that is not statistically different from the background concentration of that radionuclide for a specific site. Background radiation is radiation from any of the following situations: (1) naturally occurring radioactive materials that have not been technologically enhanced, (2) cosmic sources, (3) global fallout as it exists in the environment (e.g., from the testing of nuclear explosive devices), or (4) radon and its decay products in concentrations or levels existing in buildings or the environment that have not been elevated as a result of current or prior activities. IFB in this Plan refers to indistinguishable from the LBNL background level. The criteria to assess if the material is indistinguishable from LBNL background were established in ESG Technical Note TP-5045, *Assessment Method for Radiological Release of Potential Contaminated Soil and Sediment*.

LBNL Metals Background Concentrations. The upper estimate (99th percentile) of naturally occurring metals concentrations in soil at Berkeley Lab as presented in the report *Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory* (LBNL, 2009).

Recycled Aggregate. Material originating primarily from crushing Portland cement concrete and asphalt concrete from road maintenance and demolition projects and also from the demolition of other concrete structures.

Soil. To simplify the terminology used in this Plan, the term “soil” is used to denote not only soil but also sand, rock, gravel, and other geologic materials used as import fill.

Source Evaluation. A review of site information to assess whether the proposed import fill source area is acceptable or should be excluded because of potential human health or environmental concerns.

Ultramafic Rock. An igneous or metamorphic rock with a very low silica content and composed primarily of mafic minerals such as pyroxene, augite, and olivine. This type of rock is a potential concern because it may contain naturally occurring asbestos (NOA) or serpentine, which also may contain NOA and/or metals at concentrations exceeding the fill source screening levels specified in this Plan.

Virgin Source/Quarry. Material from an area (typically a quarry) with no known industrial, commercial, agricultural, or other use that may have resulted in chemical or radiological contamination. Material in such a source consists of either naturally occurring rock or naturally deposited aggregate. Fill material from a virgin source is considered free from extraneous organic matter and chemical or radiological contamination and does not contain any recycled material. The source may also be referred to as a virgin quarry as long as the material being distributed from the source has been mined at the quarry and has not been imported from other locations.

1.5 Types of Import Fill

The following categories of import fill are discussed in this Plan:

Bulk Backfill. Material generally designated as Type E (nonexpansive soil) in Berkeley Lab’s Facilities Master Specification Section 312323 – *Backfilling*. Bulk backfill is used to fill excavations or to raise LBNL grade and does not meet the definition of other import material provided in this section.

Engineered Fill. Material that is designated as Type A (clean stone, crushed rock, or gravel), Type B (AB), Type C (clean washed pea gravel), or Type D (clean washed sand) in Berkeley Lab’s Facilities Master Specification Section 312323 – *Backfilling*. Engineered fill is used for various projects at Berkeley Lab, including but not limited to use as a base layer under roadways and other paved areas and use as base material immediately under building foundations.

Landscaping Material. Landscaping refers to any activity that modifies the visible features of an area of land. Landscaping materials include brick, gravel, rock or stone, concrete, mulch (such as decaying leaves and bark), compost, and planting soil.

Controlled Density Fill. CDF is a self-compacting, cementitious material used primarily as a backfill in lieu of compacted backfill and is sometimes referred to as low-strength concrete. It is an acceptable alternative to Type E backfill (nonexpansive soil) or Type F (native backfill) backfill as designated in Berkeley Lab’s Facilities Master Specification Section 312323 – *Backfilling*.

1.6 Import Fill Screening Levels

The following definitions are used to classify imported fill, assess whether the fill is acceptable for use at Berkeley Lab, and identify acceptable locations for its use:

Clean Soil. Soil containing metals at concentrations that do not exceed the upper estimate of the LBNL background level (LBNL, 2009) and no detectable chemical contaminants and having radionuclide levels that are IFB (as specified in ESG Technical Note TP-5045, *Assessment Method for Radiological Release of Potentially Contaminated Soil and Sediment*).

Residential Soil. Nonhazardous soil in which concentrations of the chemicals of potential concern (COPCs) are less than or equal to the more conservative of regulatory screening levels for residents, construction workers, or the groundwater leaching pathway; having radionuclide levels that are IFB; and not meeting the definition of clean soil. Metals concentrations may exceed screening levels and still be classified as “residential” if they are less than LBNL background concentrations (LBNL, 2009).

Hazardous Soil. Soil containing chemicals or metals at concentrations above State of California or federal hazardous waste levels or friable asbestos at a concentration above the State of California hazardous waste level (i.e., 1 percent or more friable asbestos). A friable waste is one that can be reduced to a powder or dust under hand pressure when dry.

Radiologically Contaminated Soil. Soil containing radionuclides at concentrations that are above the IFB criteria detailed in ESG Technical Note TP-5045, *Assessment Method for Radiological Release of Potentially Contaminated Soil and Sediment*.

2 Roles and Responsibilities

This section provides the general roles and responsibilities of the Project Team, which consists of the LBNL team responsible for implementing the project requiring the import of fill and its subcontractors, and the Environment, Health, and Safety Division's ESG, which provides support and oversight for implementing the requirements of this Plan.

2.1 Projects & Infrastructure Modernization Division / Facilities Division Project Team

Both Berkeley Lab's Projects & Infrastructure Modernization Division (PIMD) and LBNL's Facilities Division (FAC) implement projects that may require the use of import of fill material. For each individual project, the FAC or PIMD designates a "Project Team." The Project Team consists of PIMD and FAC employees but may also include subcontractors. The Project Team is responsible for the following tasks associated with importing fill for its project:

- Identifying fill requirements and assessing if import fill is required.
- Identifying the applicable Plan requirements for the proposed import fill, and ensuring the appropriate steps are followed and documented, using the flowchart (Figure 2) and the Import Evaluation and Approval Form (Appendix A).
- Obtaining necessary funding for implementing the requirements of this Plan.
- Evaluating potential import fill sources by obtaining and reviewing available environmental documentation, including Environmental Site Assessments (ESAs), available analytical laboratory data representing the source material, and geologic maps.
- Ensuring that characterization of import fill materials is conducted under the direct supervision of either a California-registered professional in good standing (either a Professional Geologist [PG] or a Professional Engineer – Civil with training in environmental sampling).
- Reporting the results of the initial source evaluation to ESG.
- Preparing Sampling and Analysis Plans (SAPs) for proposed import fill sources if required.
- Preparing project-specific Technical Specifications for use by LBNL subcontractors based on the SAP and requirements of this Plan.
- Assessing the acceptability of the proposed import fill source, including the collection of representative samples for the analysis of potential chemical and radiological contaminants, as specified in the SAP, if required, and this Plan.
- Collecting and submitting samples to an LBNL-contracted analytical laboratory. Additionally, any samples with the potential to contain radiological contamination must be analyzed by a laboratory maintaining a Radiological Materials License.

- Documenting the evaluation and approval process using the Import Evaluation and Approval Form (Appendix A) and submitting the form to ESG for review and approval.
- Providing PDF copies and electronic data deliverables (EDDs) of the analytical results to ESG.
- Providing ESG with an Excel or Google spreadsheet presenting the analytical results with a comparison to screening levels (see Section 3.3.4).
- Importing, placing, and compacting fill material to meet the project Technical Specification.
- Tracking import of fill using manifests and/or bills of lading.
- Stopping work and informing ESG if potentially contaminated fill materials are inadvertently imported (Section 4, second bullet describes indications of potential contamination).
- Stockpiling import fill if required for on-site use at staging location(s).
- Installing and maintaining all applicable best management practices (BMPs) in compliance with ESG's *Sitewide Stormwater Pollution Prevention Plan for Industrial Activities* or a project-specific Stormwater Pollution Prevention Plan (SWPPP), required for projects greater than 1 acre in size.
- Maintaining import fill records in the appropriate project files.

2.2 ESG

ESG staff are responsible for the following activities associated with assessing the acceptability of potential import fill sources:

- Revising this Plan, as necessary, to meet changed conditions or project and regulatory requirements.
- Providing overall environmental project support and oversight of Plan compliance.
- Reviewing available environmental documentation obtained by the Project Team from the proposed import fill source.
- Identifying whether radiological analysis is required to assess potential import fill sources.
- Reviewing and approving the radiological analytical requirements and nonradiological COPCs selected for analysis by the Project Team.
- Reviewing and approving SAPs and Technical Specifications prepared by the Project Team.
- Assisting the Project Team with setting up sample collection requirements in the ESG database.
- Assisting the Project Team with the submission of samples to the analytical laboratory.
- Maintaining the analytical data in the ESG database.
- Accepting or rejecting the proposed import fill source and documenting the assessment on the Import Evaluation and Approval Form.
- Maintaining records for all import fill source areas evaluated for potential use at Berkeley Lab, including EDDs of analytical records, the Import Evaluation and Approval Form, and documentation collected to verify the historical use of the proposed source areas.

3 Evaluating Acceptability of Import Fill

3.1 Exempt Sources

This section describes the process and requirements for assessing import fill. The requirements are intended to make the process consistent for all LBNL projects. Potential fill sources must be evaluated prior to import in accordance with the process described in the following sections, except for the following materials, which are exempt from the requirements of this Plan:

- Material imported from virgin quarries approved within the previous five years or other sources within the previous 12 months
- CDF
- Landscape material from a commercial vendor

3.2 Approved Sources

In 2023, Berkeley Lab tasked Northgate Environmental Management, Inc. with collecting virgin material from quarries in the San Francisco Bay Area and assessing the suitability of the material for use as import fill in accordance with acceptance criteria provided in this Plan.

Material from the following local quarry sites was identified and tested in March 2023:

- Vulcan Materials Company Western Division (Vulcan)—operated quarry at 50 El Charro Road, Pleasanton, California (Vulcan Pleasanton Quarry)
- Vulcan-operated quarry at 885 Lake Herman Road, Vallejo, California (Vulcan Lake Herman Quarry)
- Dutra Group—operated quarry at 1000 Point San Pedro Road, San Rafael, California (Dutra San Rafael Quarry)
- Vulcan-operated quarry at 2301 Napa Vallejo Hwy, Napa, California (Vulcan Napa Quarry)

Table 1 provides the results of the March 2023 Northgate quarry assessment and indicates the quarries that have been approved as sources for import fill as of March 2023 (Northgate, 2023).

Table 1. March 2023 Quarry Assessment Results

Quarry	Date Sampled	Material	Acceptability for Import ^(c)	
			Central Developed Area ^(a)	Sitewide (Unrestricted Use)
Vulcan Pleasanton	3/17/23	Native sand (SA)	Approved	Approved
		Manufactured sand (SM) ^(d)	Approved	Approved
		Overburden soil (SO)	Approved	Approved
Vulcan Lake Herman	3/20/23	Manufactured sand (SM) ^(d)	Approved	Not acceptable
		Overburden soil (SO)	Approved	Not acceptable
Dutra San Rafael	3/22/23	Overburden soil (SO)	Not acceptable	Not acceptable

Quarry	Date Sampled	Material	Acceptability for Import ^(c)	
			Central Developed Area ^(a)	Sitewide (Unrestricted Use)
Vulcan Napa	3/24/23	Manufactured sand (SM) ^(d)	Approved	Not acceptable ^(b)
		Overburden soil (SO)	Approved	Not acceptable ^(b)

- (a) The location of the central developed area is described in Section 3.6.
- (b) Samples failed because detection limits were higher than the screening levels. Resampling would be required to determine the acceptability for sitewide use of this material.
- (c) As described in the subsection "Sampling Frequency Requirements" in Section 3.4.3, sampling is not required prior to each use for virgin quarries approved within the previous five years, provided that no chemical release has occurred since the previous assessment.
- (d) Manufactured sand (SM) is developed by crushing quarry rock into appropriately sized rock and sand to combine them into AB for construction. Therefore, the SM analytical results are representative of AB.

In addition, a radiological assessment was conducted to assess whether the material was acceptable for import based on radiological sampling results. Based on the analytical results, material from all four quarries was determined to be indistinguishable from Berkeley Lab background (IFB) and therefore would be acceptable for import from a radiological perspective (LBNL, 2023).

3.3 Prohibited Sources

Fill is not permitted to be imported from an unknown source; a source that is a current or former industrial site; a site that may have handled, used, or stored hazardous materials/waste; a site with a known history of radiological contamination; a site undergoing or having completed a cleanup action; or an unpaved parking area. The import of recycled aggregate is also prohibited.

3.4 The Process for Assessing Import Fill Sources

Before fill can be imported, the proposed source area and import material must be evaluated using the following three-step screening process: (1) an Initial Source Assessment, (2) a Detailed Source Assessment including sampling and analysis, and (3) Source Screening and Evaluation. Each of these steps will be completed by the Project Team and reviewed and approved by ESG. The end product of the process is a determination of the acceptance or rejection of the proposed import fill source. The Import Fill Acceptability Flowchart (Figure 2) provides a guide to the process.

The process is documented by the Project Team on the Import Evaluation and Approval Form (Appendix A). The Project Team will fill out the form and submit it to ESG for review and approval. Requirements for filling out the form are provided in Section 3.5

3.4.1 Partially Exempt Import Fill Categories

Materials from the following three categories are partially exempt from complying with the requirements of this Plan:

1. Material from a commercial vendor for a *de minimis* import fill project
2. Material from a commercial vendor for use as engineered fill consisting entirely of coarse sand (passes No. 4 [4.75-mm] sieve and is retained on No. 10 [2.00-mm] sieve), rock, or gravel
3. Material from a virgin source

Material from the first two categories (*de minimis* import fill project and engineered fill from a commercial vendor) can be imported for use as fill material at Berkeley Lab without sampling (Step 2) or complying with other requirements specified in this Plan unless the source is in an ultramafic rock² area. The assessment and evaluation of these sources will be limited to a review of the available geologic maps/reports to conclude whether the source is located in an ultramafic rock area. Ultramafic rocks could contain naturally occurring constituents such as asbestos, cobalt, nickel, and chromium at levels that pose a potential risk to human health or the environment. Any material proposed for import from an ultramafic rock area must be sampled to evaluate its acceptability for import in accordance with the requirements of this Plan. The type of rock in the proposed source area must be identified or approved by ESG. The third category, virgin source, is partially exempt in that it is subject only to a limited assessment process, as described below.

3.4.2 Step 1: Initial Source Assessment

The initial source assessment will be completed by the Project Team. For the first two partially exempt sources listed above (i.e. *de minimis* import fill projects and projects requiring engineered fill), the initial assessment consists only of identifying whether the source is in an ultramafic rock area. The Import Fill Approval Form is required to document the initial assessment, and a detailed source assessment (Step 2) is not required. For the third partially exempt category listed above, virgin source, the initial assessment will be limited to confirming the virgin nature of the source area; a detailed historical environmental review will not be required.

For other potential source areas, a detailed historical environmental review will be conducted to assess whether the proposed source area should be rejected because it is a current or former industrial site, a site that handles or may have handled hazardous materials/waste, a site with a history of radiological contamination, or a site undergoing or having completed a cleanup action. The assessment would also be used to help identify the potential presence of unacceptable levels of naturally occurring constituents related to ultramafic rock and/or potential radiological contamination. The review would include the following information, if available, at a minimum:

- Environmental reports
- Geological maps and reports
- Soil characterization data

The following information, if available, will be requested from the owner/operator of the source area:

- Phase I and II ESAs in accordance with American Society for Testing and Materials (ASTM) Standard E 1527-21 (*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*) and ASTM E1903-19 (*Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*). If ESAs are not available, then an equivalent assessment should be conducted to help identify any COPCs, as discussed below.

² Chromium Geochemistry in Serpentinized Ultramafic Rocks and Serpentine Soils from the Franciscan Complex of California, Department of Geological and Environmental Sciences, Stanford University, Stanford, California, American Journal of Science, Vol. 304, P.67–101, January 2004.

- Documentation that the proposed fill material is free of hazardous substances (e.g., a chemical that can cause a physical or a health hazard as defined in 29 CFR 1910.120[a][3]³ and 40 CFR 261⁴).
- Previously collected sampling results.

Previous sampling results can be used only for preliminary source assessment purposes and to identify additional COPCs. New source material sampling would still need to be completed by the Project Team as described in the following section. To assess the validity of any previously collected data, documentation must be provided that the results are representative of the material proposed for import, were sampled under direct oversight of a California-licensed PG (or Professional Engineer – Civil, with training and experience in environmental investigation), and were analyzed in accordance with the U.S. EPA’s *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods Compendium (SW-846)* (EPA, 2014)⁵ at a laboratory that is certified by the State Water Resources Control Board (SWRCB) under the Environmental Laboratory Accreditation Program (ELAP) with accreditation, when applicable, for the reported methods and analytes.

If a Phase 1 ESA is not available, an equivalent assessment will be conducted that will include the following steps:

- Site visit to observe current and past conditions and uses of the property and adjacent properties
- Review of historical records, such as historical aerial photographs, fire insurance maps (Sanborn maps), historical city directories, and historical topographic maps
- Review of state and local agency records, including but not limited to state environmental agencies, Building Departments, Fire Departments, and Health Departments
- Interviews with current and past property owners, operators, occupants, or others familiar with the property
- Review of the regulatory databases listed in Table 2

Table 2. Regulatory Agency Databases

Type of Site	Database	Website
Hazardous substance release and land use restricted sites	DTSC Envirostor	https://www.envirostor.dtsc.ca.gov/public/
Water quality programs and leaking underground fuel tank sites	SWRCB Geotracker	https://geotracker.waterboards.ca.gov/
National Priority List (Superfund Sites)	EPA	https://www.epa.gov/superfund/search-superfund-sites-where-you-live
Geographic Ultramafic Rock Units (GURUs)	National Geologic Map Database	https://ngmdb.usgs.gov/Prodesc/proddesc_29220.htm

³ <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.120>

⁴ <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-I/part-261>

⁵ <https://www.epa.gov/hw-sw846/sw-846-compendium>

3.4.3 Step 2: Detailed Source Assessment

With the exception of the two exempt categories (CDF and landscape material from a commercial vendor) and material for a *de minimis* fill project or engineered fill from a commercial vendor that does not originate from an ultramafic rock area, samples of proposed import fill material must be collected from both virgin quarries and other proposed import fill sources to assess the acceptability of the material for use at Berkeley Lab. For proposed import fill sources other than a virgin quarry, an SAP is required that will be completed by the Project Team and reviewed and approved by ESG. SAP requirements are provided in the subsection “SAP Requirements.”

Sample Collection and Analyses Requirements

Proposed fill material from a virgin quarry will be sampled for the following:

- Title 22 Metals
- Asbestos if the source is potential NOA-containing material (e.g., ultramafic rock)

Proposed fill material from all other sources will be sampled for the following:

- Total petroleum hydrocarbons (TPH) fuel scan
- Volatile organic compounds (VOCs)
- Polychlorinated biphenyls (PCBs)
- Asbestos if the source is potential NOA-containing material (e.g., ultramafic rock)

In addition to the analytes listed above, samples from proposed fill material will be analyzed for potential contaminants listed in Table 3 based on the fill source area and/or historical land use where applicable.

Table 3. Additional Analytes Based on Source Land Use

Fill Source Location / Land Use	Additional Analytes
Land near a current or former freeway or major roadway	Polycyclic aromatic hydrocarbons (PAHs)
Agricultural land	Pesticides and herbicides
Residential/acceptable commercial land	Semivolatile organic compounds (SVOCs), pesticides, and herbicides

In addition, the Project Team will contact the ESG radiological SME to assess if sampling for radiological constituents/background (if applicable) is required. Specific chemical and radiological (if required) sampling requirements must be confirmed with the appropriate ESG SME.

Samples must be analyzed by a laboratory that is certified by a SWRCB ELAP certified laboratory for nonradiological analyses and by a DOE Consolidated Audit Program qualified laboratory for radiological analyses. The laboratory must report in accordance with the Department of Defense / Department of Energy Quality Systems Manual (DoD/DOE QSM) for which they are accredited, including determination of laboratory reporting limits. Laboratory analytical methods, LBNL analytical request codes, and sample containers, preservation, and hold time requirements are provided in Table 4. The details provided in Table 4 should be confirmed prior to sample collection or preparation of an SAP, if required. Samples

must be collected under the direct oversight of a California-licensed PG (or Professional Engineer – Civil, with training and experience in environmental investigation).

Table 4. Analytical Laboratory Methods, Containers, Preservation, and Hold Times

Analytes	Analytical Method	LBNL Analysis Code	Minimum Sample Mass	Or Container ^(d)	Hold Time Collection to Extraction	Hold Time Collection to Analysis
Title 22 metals	EPA 6010/6020 ^(a)	TTLCLBNL-DRY	50 grams	8 oz glass	NS	6 months ^(b)
Mercury	EPA 7471 ^(a)	TTLCLBNL-DRY	50 grams	8 oz glass	NS	28 days ^(b)
Chromium VI	EPA 7196A	E7196	50 grams	8 oz glass	NS	30 days ^(b)
PCBs	EPA 8082A	E8082:DRY	50 grams	8 oz glass	NS	40 days ^(b)
TPH	EPA 8015M	EM8015ERP	50 grams	8 oz glass	14 days	40 days ^(b)
SVOCs/PAHs	EPA 8270	E8270-DRY	50 grams	8 oz glass	14days	40 days ^(b)
Organochlorine Pesticides	EPA 8081	E8081	50 grams	8 oz glass	14 days	40 days ^(b)
Herbicides	EPA 8150	E8150	50 grams	8 oz glass	14 days	40 days ^(b)
Asbestos	CARB 435 ^(e)	ASBESTOS-CARB435	50 grams	Not specified	NS	NS
VOCs	EPA 8260B	E8260:DRY	5 grams	TerraCore ^(c)	NS	14 days
Gamma Spectroscopy	EML HASL-300, Ga-01-R	GSDRYSOIL	200 grams	16 oz PE	NS	NS
Am-241 and Cm-243/244 by Alpha Spectroscopy	DOE AM-05-RC Mod	AM+CM:OT	20 grams	16 oz PE	NS	NS
Plutonium Isotopes	DOE Pu-11-RC Mod	PUIOS+PU242:OT	20 grams	16 oz PE	NS	NS
Uranium Isotopes	Alpha Spectroscopy	UIISO:OT	20 grams	16 oz PE	NS	NS
Tritium	E906EPSM	E906EPSM	20 grams	16 oz PW	NS	NS
Strontium-90	EPA 905.0 Mod	SR90:OT	20 grams	16 oz PE	NS	NS

(a) Any metal detected at a concentration in mg/kg that exceeds 10 times the California Soluble Threshold Limit Concentration (STLC) value in µg/L must be reanalyzed using the California Waste Extraction Test (WET) and also using the Toxicity Characteristic Leaching Procedure (TCLP) using preparation by USEPA Method 1311 (TCLP) if the concentration exceeds 20 times the STLC value.

(b) Samples must be kept at <6°C from time of collection until analysis.

(c) Preparation method EPA 5035 uses Encore, TerraCore, or similar sampling devices for collecting soil.

(d) One container can be used for multiple analytes. Confirm with laboratory the number of sample containers required.

(e) CARB 435 PLM = California Air Resources Board Method 435 using Polarized Light Microscopy.

EML = DOE Environmental Measurements Laboratory

PE = polyethylene

NS = not specified

SVOCs = semivolatile organic compounds

PAHs = polycyclic aromatic hydrocarbons

TPH = total petroleum hydrocarbons (Fuel Scan)

PCB = polychlorinated biphenyls

VOCs = volatile organic compounds

Number and Type of Samples Required

For native quarries, two 4-point composite samples representative of the material to be imported are required to initially assess the acceptability of the fill.

For other source areas or stockpile sampling, the minimum sampling frequency, which complies with the DTSC *Information Advisory Clean Imported Fill Material Fact Sheet* (DTSC, 2001), is provided in Table 5.

Each sample listed in Table 5 consists of a 4-point composite for each non-VOC chemical analysis and a discrete sample for VOC analysis.

Table 5. Minimum Number of Soil Samples Required

Borrow Area Sampling Requirements	<2 acres	2–4 acres	4–10 acres	>10 acres
	4	1 for every half acre	8	8 locations with 4 subsamples per location
Stockpile Sampling Requirements	Up to 1,000 CY = 1 sample per 250 CY			
	1,000 to 5,000 CY = 4 samples for first 1,000 CY + 1 sample per each additional 500 CY			

In addition, the Project Team will contact the ESG radiological SME to confirm the appropriate number and type (i.e., composite or individual) of radiological samples, if radiological sampling is required.

Excluding stockpiles that have been sampled, after the initial 1,000 CY of material is brought to Berkeley Lab, an additional sample of the required analytes must be collected for each subsequent 1,000 CY. The subsequent samples will be collected to document the continued acceptability of the fill, and the material can be placed prior to receipt of the analytical results. If radiological samples are also required, the radiological SME should be contacted to confirm whether additional radiological samples are required.

SAP Requirements

Samples must be collected in accordance with ESG's *Quality Assurance Program Plan for the LBNL Environmental Restoration Program*, and radiological constituents must be collected in accordance with ESG Procedure 266, *Dose Biota Sampling for the Environmental Radiological Protection Program*.

The SAP must include the following elements at a minimum and be signed by a California-licensed PG (or Professional Engineer – Civil, with training and experience in environmental investigation):

- Description of the project that requires the import fill material
- Summary of the results of the initial source assessment
- Identification of the chemical and radiological COPCs
- Number, type (individual or composite), and locations of samples required
- Sample collection methods
- Required analytical methods, LBNL request codes, sample preservation requirements, minimum sample volumes, container requirements, and maximum holding times

Sampling Frequency Requirements

Virgin quarry sources must be resampled (certified) for LBNL acceptance every five years. Sampling is not required prior to each use for virgin quarries approved within the previous five years, provided that no chemical release has occurred since the previous assessment. Approved source areas (excluding virgin sources) must be sampled prior to each use unless the source has been approved for import within the previous 12 months and provided that no chemical release has occurred since the previous

assessment. Written confirmation from the import fill source owner/operator and review of online regulatory databases are sufficient for identifying if a new chemical release has occurred.

3.4.4 Step 3: Screening and Evaluation

The analytical results will be compared to two sets of screening criteria, Restricted and Unrestricted Use criteria, to determine whether the soil is acceptable for import and, if acceptable, the locations where the fill can be placed. The Unrestricted Use criteria provide the concentrations acceptable for use anywhere on site, which includes both the open undeveloped areas and the central developed area. The Restricted Use criteria are more stringent and provide the concentrations that limit the acceptability of the fill to the central developed area of the site. The locations of the central developed area and the open areas are described in Section 3.6. Soil that does not meet the Unrestricted Use criteria is prohibited from import. The two sets of screening criteria are listed in Table 6. Additional details on the source of the screening levels are provided below. The regulatory agency screening levels listed in Table 6 must be checked as part of the fill assessment process to determine whether any of the levels have been revised.

Table 6. Import Fill Screening Criteria (Concentrations in mg/kg)

Analyte	Unrestricted Use Criteria	Restricted Use Criteria		
Polychlorinated Biphenyls	Not detected at the DOE/DoD Quality Systems Manual method detection limit	Not detected at the DOE/DoD QSM method detection limit (MDL)		
Volatile Organic Compounds				
Semivolatile Organic Compounds / Polyaromatic Hydrocarbons				
Herbicides				
		Concentration ^(a)	Source	
Oil	Not detected at the DOE/DoD Quality Systems Manual method detection limit	≤2,400	DTSC SL Carbon range 17–32	
Diesel	Not detected at the DOE/DoD Quality Systems Manual method detection limit	≤97	DTSC SL Carbon range 9–16	

Metals ^(a)	Concentration	Source ^(b)	Concentration	Source ^(c)
Antimony	<6	LBNL background	≤31	EPA RSL
Arsenic	≤28	LBNL background	≤28	LBNL background
Barium	≤410	LBNL background	≤3,000	Construction worker ESL
Beryllium	≤1.0	LBNL background	≤16	DTSC SL
Cadmium	≤5.6	LBNL background	≤7.1	DTSC SL
Chromium, Total	≤120	LBNL background	<2,500	Hazardous waste criteria
Cobalt	≤25	LBNL background	≤25	LBNL background level
Copper	≤63	LBNL background	<2,500	Hazardous waste criteria
Lead	≤43	LBNL background	≤80	DTSC SL
Mercury	≤0.42	LBNL background	≤1.0	DTSC SL
Molybdenum	≤4.8	LBNL background	≤390	EPA RSL
Nickel	≤272	LBNL background	≤272	LBNL background
Selenium	≤4.9	LBNL background	<100	Hazardous waste criteria
Silver	≤2.9	LBNL background	≤390	EPA RSL/ESL

Analyte	Unrestricted Use Criteria		Restricted Use Criteria	
Thallium	≤10	LBNL background	≤10	LBNL background
Vanadium	≤90	LBNL background	≤390	EPA RSL
Zinc	≤140	LBNL background	<5,000	Hazardous waste criteria
Asbestos	<0.25% ^(d)		<Method Detection Limit ^(d)	
Radionuclides	IFB ^(e)		IFB ^(e)	

(a) Any fill that contains a metal at a concentration above the Federal TCLP or California STLC is hazardous and prohibited from import

(b) *Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory* (LBNL, 2009).

(c) The acceptance criteria for metals for Restricted Use are the most stringent of the SLs for residential soil (DTSC, 2020) or the RSLs (EPA, 2023) if an SL is not specified, the San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) for construction workers (RWQCB, 2019), and California hazardous waste criteria. If a metal concentration exceeds any of these screening levels, the material would still be acceptable for Restricted Use if the concentration is less than or equal to the established LBNL background level (LBNL, 2009).

(d) Asbestos screening criteria from the DTSC screening level for NOA at school sites, analyzed using Polarized Light Microscopy by EPA Method 600/R-13/116 with CARB 435 preparation (milling) Level A for a 0.25 percent target analytical sensitivity (DTSC, 2004).

(e) IFB criteria from ESG Technical Note TP-5045, *Assessment Method for Radiological Release of Potentially Contaminated Soil and Sediment*.

DOE/DoD QSM = Department of Energy / Department of Defense

RSL = EPA Regional Screening Level

DTSC = Department of Toxic Substances Control

SL = DTSC Screening Level

ESL = Environmental Screening Level

STLC = Soluble Threshold Limit Concentration

IFB = indistinguishable from background

TCLP = Toxicity Characteristic Leaching Potential

Analytical results can be compared to the screening level using either the maximum detected concentration or, if the maximum concentration exceeds the screening level, the 95% upper confidence limit (UCL) if a sufficient number of samples are collected. UCLs cannot be used if hot spots (localized areas with elevated concentrations compared to adjacent areas) are present. The EPA's ProUCL statistical software (EPA, 2022a,b) can be used to determine 95% UCLs and identify potential outliers in data sets that could be an indication of a hot spot. Material may still be acceptable for import if hot spot areas are delineated and excluded from import and the import of the remaining material is approved by ESG.

The import of material with detections of common laboratory contaminants (e.g., acetone, methylene chloride, toluene) may still be acceptable if the detected concentrations are less than residential levels and the import is approved by ESG.

3.5 Import Evaluation and Approval Form

The Project Team completes Sections 1 through 3 of the Import Evaluation and Approval Form (Appendix A) to document the results of the source assessment process described above and attaches all source assessment documents to the Form. The Project Team also prepares an Excel or Google spreadsheet of analytical results including comparisons to screening levels, highlighting concentrations exceeding the screening levels, and attaches the table to the Form. The Project Team Manager or their designee will sign Section 4 of the Form to approve the source assessment process and describe any deviations from Plan requirements, and then submit the Form to ESG. ESG will then document the results of the source screening and evaluation process described above on section 5 of the Form. The final step in the process is the signature of the ESG nonradiological and radiological SMEs to document the acceptance or rejection of the import fill source.

3.6 Description of Import Fill Placement Locations

The LBNL *Ecological Risk Assessment* (LBNL, 2002), which was required and approved by DTSC, is based on the assumption that the “central developed area” of the site does not provide a suitable habitat or resources for wildlife. Ecological receptors could therefore not be exposed to contaminants in the soil within that area. Ecological receptors could be potentially exposed to soil contaminants in only the “open areas” of the site. Since potential ecological risk is not assessed as part of the import fill screening process, only clean soil is acceptable for use in the open areas.

The locations of the “central developed area” and the “open areas” of the site are shown on Figure 3. Note that the open areas shown on the figure have been modified from those shown in the *Long-Range Development Plan, Draft Environmental Impact Report* (LBNL, 2007) to include both areas that have been subsequently developed (construction of buildings, parking lots, construction staging areas, etc.) and small areas classified as rustic zones that separate the developed areas.

4 Management of Imported Fill

The following controls will be implemented by the Project Team for the management of imported fill. These controls are consistent with those in the DTSC-approved SMP for the reuse/replacement of excavated soil at Berkeley Lab:

- Review bill of lading to confirm the source area for each load of import fill being transported onto the project site.
- Observe import fill as it is offloaded or placed as fill/backfill for signs of potential contamination. Reject any load where the following indications of potential contamination are observed or suspected:
 - Soils that smell of oil, gasoline, solvents, or other chemicals
 - Soils that contain debris that could be a potential source of contamination, such as sanitary sewer or process piping or solid waste
 - Soils that appear to have changed color through staining
 - Soils that have nontypical soil characteristics or qualities (e.g., sheens, powders, chemicals, or nonaqueous liquids, such as beads of mercury)
- Implement dust control measures for stockpiling of import fill by wetting the soil, as needed. Wetting the soil should be kept to a minimum to avoid runoff. Cover the stockpile with plastic sheeting when not in active use and at the end of each workday. The plastic-sheeting cover should be secured with sandbags or other similar weights on the edges.
- Follow ESG's *Sitewide Stormwater Pollution Prevention Plan for Industrial Activities* or the project-specific SWPPP BMPs, including requirements to prevent sediment from discharging into the storm drain system. If there is any potential for rain, soil stockpiles must be surrounded by straw wattles, silt screens, or similar material (in addition to being covered by plastic sheeting).
- Ensure that imported fill does not mix with soil from other areas known to be contaminated or considered potentially contaminated.
- For import fill consisting of soil exceeding clean soil levels (i.e., residential soil), ensure that exposed fill is located a minimum of 50 feet laterally from any creeks or storm drain openings and that the base of the backfilled soil is at least 5 feet above the groundwater highstand.
- Ensure that any residential soil is covered with either hardscape (paving, foundation materials) or at least 6 inches of clean soil.
- Provide signage/labeling for each stockpile with sufficient information to maintain control. At a minimum, the label should provide the responsible person's name and phone number, the date of import, and the source location.

5 Fill Assessment Record Keeping

Records of the initial assessment, source material sampling, source area evaluation, and final disposition of the imported fill, as applicable, will be maintained as described below. ESG will maintain the records for each proposed import fill source. The Project Team will maintain records for the import fill sources that are approved and used on its project.

The records to be maintained may include, but are not limited to, the following:

- Signed Import Evaluation and Approval Form (including supporting documentation).
- Analytical results provided by the source area owner/operator, including maps or figures of sample locations, coordinates, and photographs, if available.
- Analytical results for samples collected by the Project Team. ESG will maintain the EDDs of the analytical results in the ESG database. The Project Team will maintain the PDF copies of the results.
- Maps or figures of sample locations, coordinates, and photographs, if available, collected by the Project Team.
- Excel or Google spreadsheet of analytical results and screening levels documenting the evaluation process for assessing the import fill source to be maintained by ESG.
- Maps, photographs, and coordinates of the location where the fill was placed.
- Bills of lading or manifests of the import fill to be maintained by the Project Team.

6 References

- DTSC, 2001. *Information Advisory Clean Imported Fill Material Fact Sheet*. October.
<https://dtsc.ca.gov/information-advisory-clean-imported-fill-material-fact-sheet/>.
- DTSC, 2004. *Interim Guidance Naturally Occurring Asbestos (NOA) at School Sites*, revised 9/24/04.
- DTSC, 2020. Human and Ecological Risk Office (HERO), Human Health Risk Assessment (HHRA) Note 3, *DTSC-Modified Screening Levels*. June 3.
- EPA, 2014. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods Compendium*, EPA SW-846, Update 5, Revision 8. April.
- EPA, 2022a. ProUCL Version 5.2.0 Technical Guide: Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations.
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- EPA, 2023. *Regional Screening Levels – Generic Tables*. <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>. May.
- ESG Procedure 266, *Dose Biota Sampling for the Environmental Radiological Protection Program*, ESG, EHS, LBNL.
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- LBNL, 2007. *Lawrence Berkeley National Laboratory Long-Range Development Plan, Draft Environmental Impact Report*, January 22; accepted as final, with revisions, July.
- LBNL, 2009. *Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory*, Report Number LBNL-1782E. Revised April.
- LBNL, 2023. Environmental Services Group Internal memo from John A. Cummings, May 3.
- Master Specifications Section 312323 – *Backfilling*, Facilities Division, LBNL.
- Northgate, 2023. *Import Quarry Material Testing Report, Lawrence Berkeley National Laboratory, Berkeley, California*. April.
- Quality Assurance Program Plan for the Lawrence Berkeley National Laboratory Environmental Restoration Program*, ESG, EHS, LBNL.

Radiological Soil Management Plan, PP-5006, ESG, EHS, LBNL.

RWQCB, 2019. *Environmental Screening Levels. Interim Final 2019*. Revision 2. July 25.
https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html.

Soil Management Plan for the Lawrence Berkeley National Laboratory, ESG, EHS, LBNL.

Stormwater Pollution Prevention Plan for Industrial Activities, ESG, EHS, LBNL.

Figures

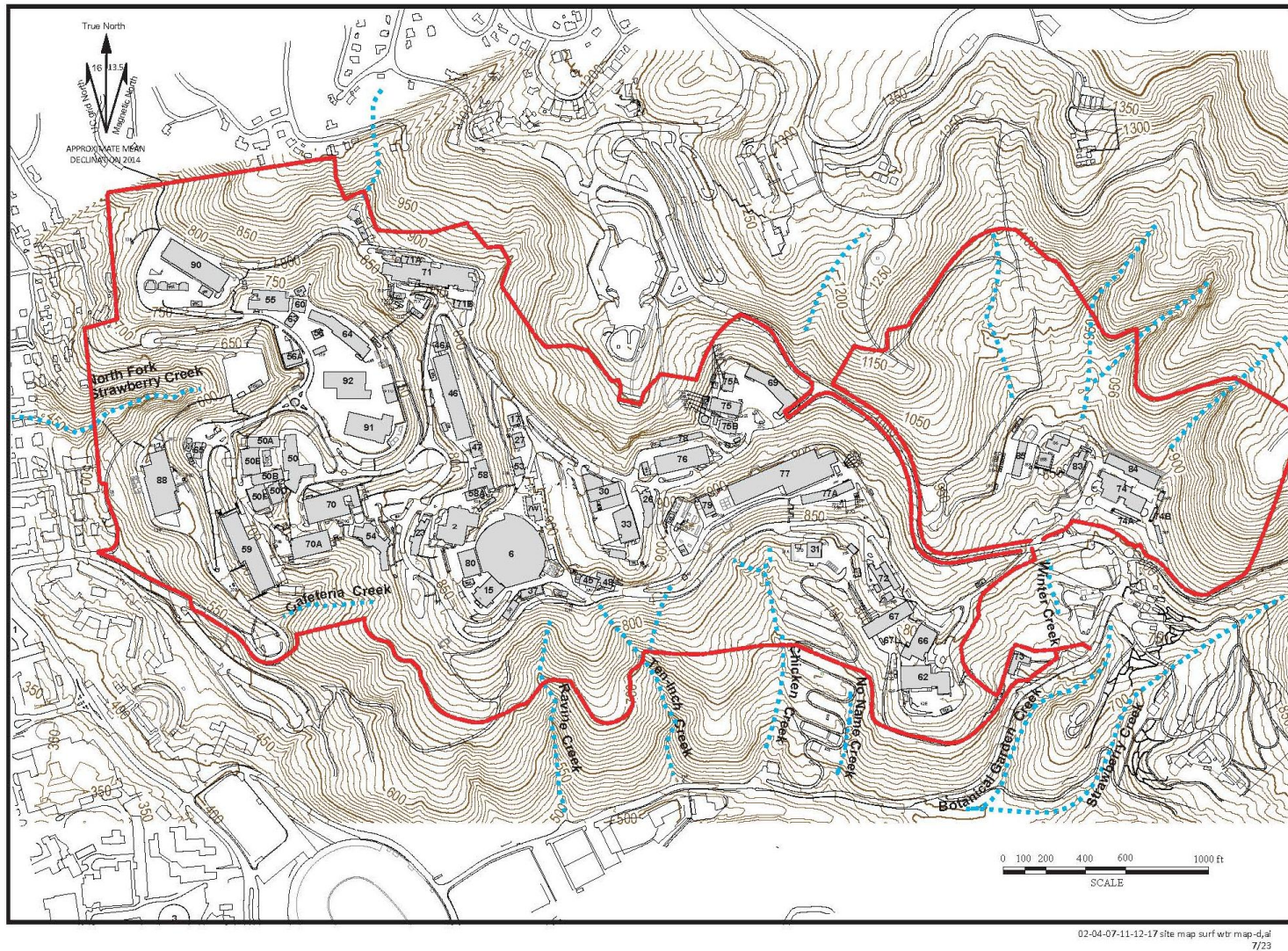


Figure 1. Site Map and Topography, Lawrence Berkeley National Laboratory

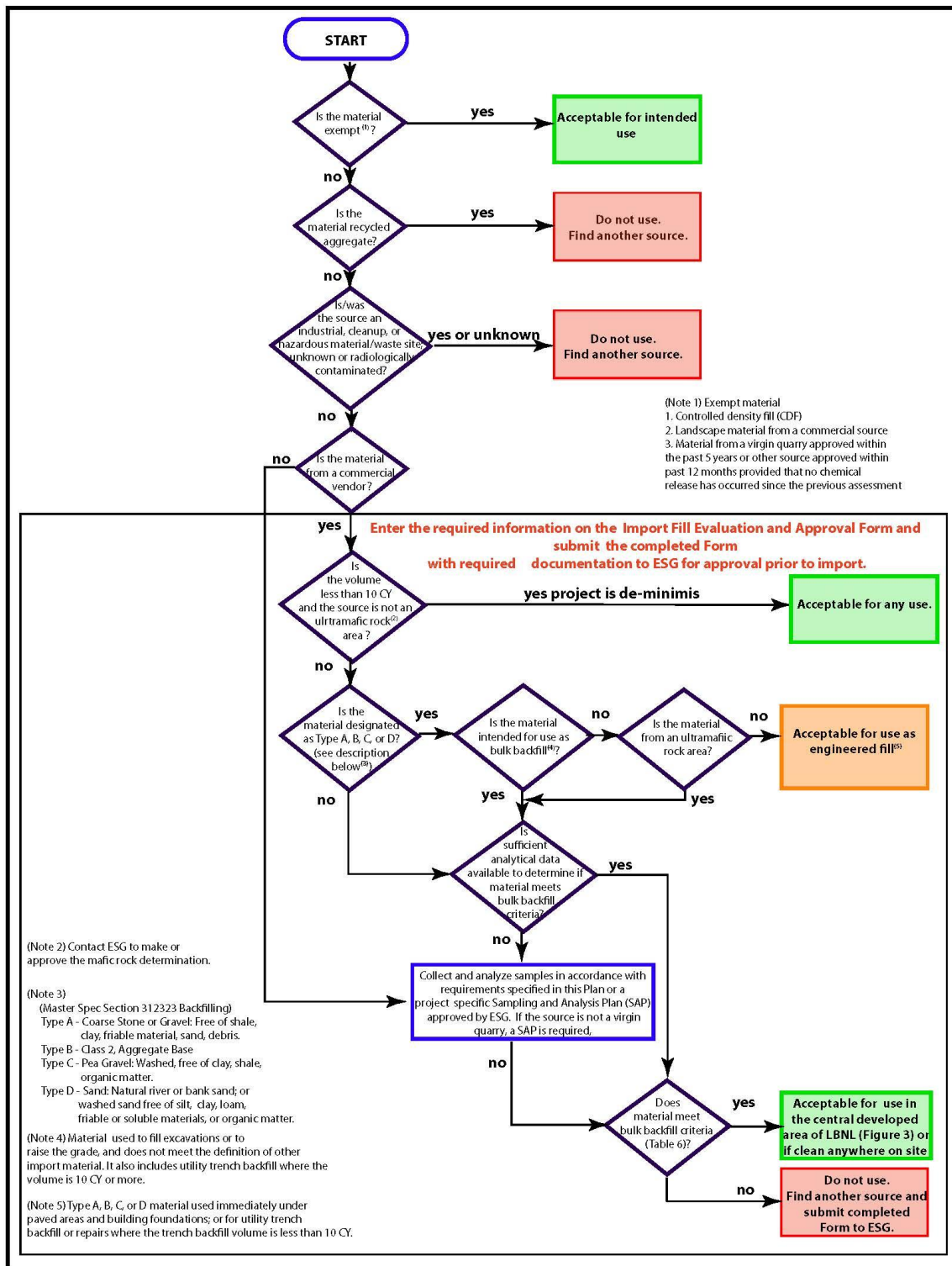


Figure 2. Flow Chart for Determining Acceptability of Import Fill

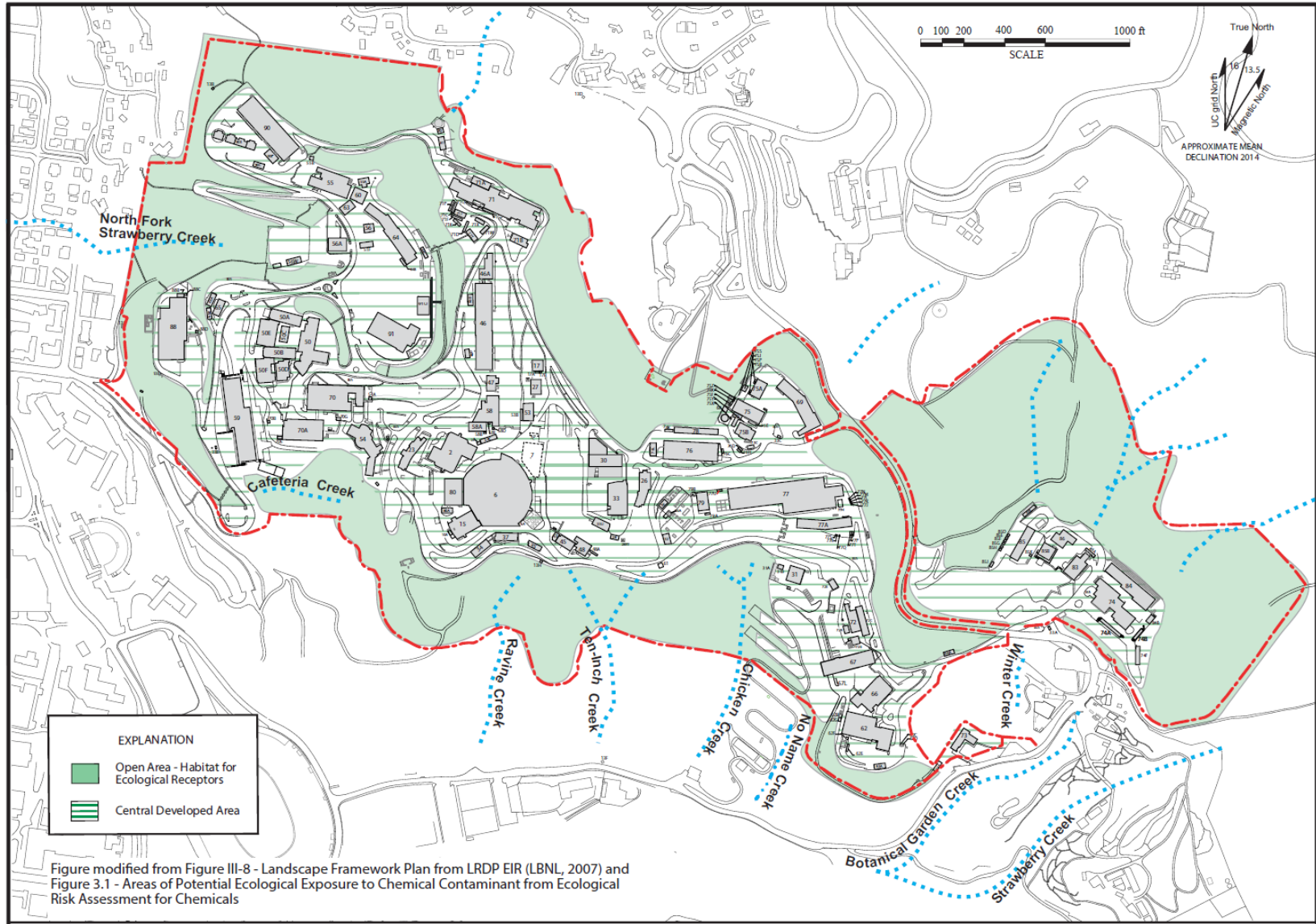


Figure 3 Location of Central Developed Area and Open Area, Lawrence Berkeley National Laboratory

Appendix A

Import Evaluation and Approval Form

Section 1: Project Information (to be completed by the Project Team)	
Project Name and ID Number:	Date:
Requestor Name and Organization:	
Requestor Phone # and Email:	
Location and Description of Planned Backfill Use: (attach map)	
Expected Date of Import:	
Expected Volume of Import (CY):	
Section 2: Source Area Information (to be completed by the Project Team)	
Source Location/Name:	
Source Address:	
Source Owner/Rep Name and Phone #:	
Source Area Land Use (e.g. virgin quarry, agricultural, residential, commercial, open space etc.)	
Check the box if response is yes	
☐	Source is unknown, an industrial site, a site that handles or may have handled hazardous materials/waste, a site with radiological contamination, or a site undergoing or having completed cleanup. (If box is checked stop here. Do not import.)
☐	Material is recycled aggregate. (If box is checked stop here. Do not import.)
☐	Source is a virgin quarry approved for import of fill within the past 5 years or other location approved within the past 12 months and no chemical release during that period. (If box is checked import is acceptable. Skip to Section 4.)
☐	Project is de-minimis (less than 10 CY) or material is engineered fill and documentation that source is not an ultramafic rock area has been approved by ESG. Attach non-ultramafic source documentation. (If box is checked import is acceptable. Skip to Section 4.)

Section 3: Proposed Source Assessment (to be completed by the Project Team) (See Import Fill Plan)	
☐	Source Evaluation has been completed. Attach source evaluation documents and analytical results.
☐	Sampling and Analysis Plan (SAP) is required and has been approved by ESG (an SAP is not required for virgin quarries).
☐	Source is in an ultramafic rock area (i.e. serpentine rock/soils from the Franciscan Complex). (Asbestos sampling is required if box checked)
☐	Source area material has been analyzed for Chemicals of Potential Concern (COPCs) approved by ESG and the analytical data has been submitted to ESG for review. Check all that apply. ☐ Metals ☐ Pesticides ☐ PCBs ☐ SVOCs ☐ VOCs ☐ TPH ☐ Asbestos ☐ PAHs ☐ Radionuclides of Potential Concern ☐ Other (List) _____
Section 4: Approval of Source Assessment (to be completed by Project Team Manager or Designee)	
☐	Source Assessment was conducted in accordance with all requirements of the Import Fill Plan and the Sampling and Analysis Plan (SAP) if prepared.
Comments/Deficiencies in Evaluation:	
Name and Title (Printed):	
Signature: _____ Date: _____	
Section 5: Source Screening and Evaluation (to be completed by ESG)	
Check the box if response is yes	
☐	Source Assessment information has been reviewed by ESG
☐	An SAP is required and has been approved by ESG
☐	Concentrations of all detected COPCs are below the Acceptance Criteria (Table 6 of the Import Fill Plan).
☐	The 95% UCLs for all chemical analytes exceeding the Acceptance Criteria, if calculated, are below the Acceptance Criteria (Table 6 of the Import Fill Plan).
☐	Radionuclides, if analyzed, are IFB

Section 6: Source Acceptance/Rejection (to be completed by ESG)	
☐	Source approved for import.
☐	Source rejected for import.
Reason for Rejection:	
Non-radiological Approval:	
Name and Title (Printed):	
Signature:	Date:
Radiological Approval:	
Name and Title (Printed):	
Signature:	Date:
Attachments (to be completed by Project Team)	
Check the box if item is attached	
☐	Spreadsheet summarizing the analytical results and screening levels
☐	Source Assessment Documents
☐	Maps or figures showing sampling locations
☐	Other (Describe)