

Middle-Mile Broadband Network (MMBN) Infrastructure Projects – Hazardous Waste

MMBN – 0458 (Revised 01/26)

In addition to the attached Encroachment Permit General Provisions (TR-0045), the following special provisions are also applicable to Middle-Mile Broadband Network (MMBN) projects:

- 1. GENERAL:** The California Department of Technology (CDT) is partnering with joint builders, including private broadband providers, to install broadband infrastructure within the State highway right-of-way as part of the MMBN infrastructure. "Joint Builder" refers to MMBN partners, whether the infrastructure is owned or leased by CDT.
- 2. APPLICABILITY:** These provisions apply to CDT MMBN joint build projects when regulated material containing aeri ally deposited lead is suspected in the permittee's MMBN project.

3. REGULATED MATERIAL CONTAINING AERIALLY DEPOSITED LEAD (ADL)

3-1A General

The California Department of Technology (CDT) and its partners, including private broadband providers, are the responsible entity and the generators of ADL regulated material within the MMBN project. ADL regulated material generated within Caltrans owned property (the state highway system right-of-way), is subject to management under the Department of Toxic Substances Control (DTSC) and Caltrans agreement Docket No. ESPO-SMA 15/16-001 Soil Management Agreement for Aeri ally Deposited Lead-Contaminated Soils, as amended (ADL Agreement). ADL regulated material generated within the MMBN project, but outside the Caltrans right-of-way, is subject to DTSC oversight. CDT and their partners shall notify DTSC and coordinate ADL soil management when located outside the Caltrans right-of-way.

3-1A(1) Management of the material includes:

1. Worker Exposure Control Measures
2. Excavating
3. Loading and unloading containers or trucks
4. Stockpiling
5. Transporting
6. Disposal

3-1A(2) Manage ADL regulated material under the rules and regulations of the following agencies:

1. US Department of Transportation
2. US EPA
3. California Environmental Protection Agency
4. CDPH
5. DTSC
6. Cal/OSHA
7. California Department of Recycling and Recovery
8. California Air Resources Board
9. RWQCB, applicable region
10. Applicable air district

4. DEFINITIONS

average ADL concentration: Calculated using the 95 percent upper confidence limit of the mean (95%UCL).

ADL regulated material: Contaminated material with either an average ADL concentration of more than 80 mg/kg total lead, or 5 mg/L or greater soluble lead tested using the California Waste Extraction Test (CA-WET), or 5 mg/L or greater soluble lead tested using the Toxicity Characteristic Leaching Procedure (TCLP).

Minimal disturbance: Occurs when excavation of ADL regulated material is limited and is replaced within the immediate area of disturbance. Material is not removed, disposed, or placed elsewhere within the project limits.

Surplus material: Excavated ADL Regulated material that cannot be replaced within the immediate area of disturbance and may be placed within the project limits as shown and authorized.

Excess surplus material: Excavated ADL Regulated material that cannot be placed at an authorized location within the project limits and must be disposed of.

California Hazardous Waste: ADL regulated material that is a generated hazardous waste (Caltrans Classification Type Z-2) that must be disposed of at an appropriately permitted California Class I disposal facility. Type Z-2 material has average ADL concentrations greater than or equal to 1,000 mg/kg total lead or 5.0 mg/L soluble lead as tested using the CA-WET.

Commercial/Industrial Material: ADL regulated material that may be designated

for reuse within the Caltrans' right-of-way (Caltrans Classification Type Com) or disposed at an appropriately permitted California Class II or Class III disposal facility. Type Com material has average ADL concentrations less than 5.0 mg/L soluble lead and more than 80 mg/kg total lead but not exceeding 320 mg/kg total lead. The soluble lead is tested using the CA-WET.

State Representative: Caltrans representative for encroachment permit – either Caltrans Resident Engineer or Permit Engineer.

X-ray Fluorescence (XRF): A non-destructive chemical analysis method used to determine metals concentration within soils and sediment. XRF uses a field sampling methodology to perform rapid screening of ADL contaminated soil. Field screened total lead concentration values are verified against laboratory confirmation samples for quality assurance and to maintain consistency between XRF readings on ADL contaminated soil within a project's construction limits.

4-1A General

To comply with the ADL Agreement and Concurrence Letter in areas containing ADL regulated material within Caltrans right-of-way, assume the soil is Type Com for worker health and safety and excavation activities.

4-1A(1) Air Monitoring – Hub Construction

Based on the type of construction activities, trenching and installation of fiber optic conduit does not require air monitoring. For work associated with hub construction locations, air monitoring is required as described in Sections 5-1A (Perimeter Air Monitoring Plan) and 6-1C (Air Monitoring).

4-1A(2) Minimal Disturbance

Projects with only minimal disturbance excavation activities do not require plan submittals, sampling, or analysis data reports as described in Section 5 (Plan Submittals) and Section 6 (Construction). Minimal disturbance excavation activities that do not require sampling and analysis data include the following:

- 1 Trenching and plowing for the installation of conduit, where excavated soil will be used to backfill the trench
- 2 Roadway excavation and structure excavation for installation of network vaults, where soil will be placed immediately adjacent to and not extend more than 2 feet away from the vault

4-1A(3) Surplus and/or Excess Surplus Material

Any excavation activities that generate surplus and/or excess surplus

material require sampling and analysis data for stockpiling, transporting, placing, and disposing.

Projects with surplus and/or excess surplus material require plan submittals, sampling, and analysis data reports as described in Section 5 (Plan Submittals) and Section 6 (Construction) to comply with the ADL Agreement and Concurrence Letter.

Notify DTSC and obtain regulatory oversight for management of ADL regulated material generated outside the Caltrans right-of-way.

5. PLAN SUBMITTALS

When working within Caltrans right-of-way the following plans are required as part of compliance with the ADL Agreement. Permittee must submit one paper and one electronic copy of each of the following plans to the State Representative for review and approval. The State Representative may allow construction to proceed while minor revisions or amendments are being completed.

5-1A Perimeter Air Monitoring Requirements/Plan – Hub Construction

Submit a perimeter air monitoring plan within 15 days of Permit approval when excavating ADL regulated material on property that borders land used for schools, daycare centers, hospitals, or areas of special community concern. Perimeter air monitoring must be part of the project health and safety and include:

1. Location and type of equipment
2. Sampling frequency
3. Name and address of the laboratory that will perform the analyses

5-1B Excavation and Transportation Plan

Submit an excavation and transportation plan within 15 days of Permit approval for ADL regulated material, required when soil is generated within Caltrans property.

The excavation and transportation plan must:

1. Comply with:
 - 1.1. DTSC regulations.
 - 1.2. ADL Agreement.
 - 1.3. Cal/OSHA regulations.
2. Include:
 - 2.1. Procedures for excavating, stockpiling, transporting, placing, and disposing of ADL regulated material. Identify where minimal disturbance, surplus, and excess surplus material excavation will occur.

- 2.2. Excavation schedule by location and date.
- 2.3. Locations for temporary stockpiles.
- 2.4. Sampling and analysis plans for areas after removal of a stockpile, including:
 - 2.4.1. Location and number of samples.
 - 2.4.2. Name and address of the laboratory that will perform the analysis.
- 2.5. Dust control measures.
- 2.6. Air monitoring locations.
- 2.7. Transportation equipment and routes. Storage and transport containers must comply with 22 CA Code of Regs § 66263.10 through 66263.18.
- 2.8. Method for preventing spills and tracked material onto public roads.
- 2.9. Truck waiting and staging areas.
- 2.10. Name and addresses of the California permitted disposal facilities for excess surplus ADL regulated material.
- 2.11. Example bill of lading to be carried by trucks transporting Type Com (Commercial/Industrial) material on public roads beyond the limits of the controlled access construction zone. The bill of lading must include:
 - 2.11.1. US Department of Transportation description, including shipping name.
 - 2.11.2. Hazard class.
 - 2.11.3. Identification number.
 - 2.11.4. Handling codes.
 - 2.11.5. Quantity of material.
 - 2.11.6. Volume of material.
- 2.12. Example hazardous waste manifest to be carried by trucks transporting Type Z-2 (California hazardous waste) material for disposal
- 2.13. Spill contingency plan for ADL regulated material.
- 2.14. Copies of the contract plan sheets showing locations where minimal disturbance, surplus, and excess surplus material excavation will occur and locations where surplus material placement is proposed.

5-1B(1) Bill of Lading

Submit copies of bills of lading used to transport Type Com material for placement, stockpile, or disposal within 5 business days of soil disturbance.

5-1C Sampling and Analysis Plan

Submit a sampling and analysis plan for placement, stockpiling, transportation,

and disposal of surplus or excess surplus ADL regulated material at least 15 business days prior to beginning excavation work. Do not start excavation work until the plan is authorized.

The sampling and analysis plan must:

1. Comply with:
 - 1.1. DTSC and Cal/OSHA regulations
 - 1.2. US EPA Method 6200, "Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment" for field sampling, field screening procedure, data analysis and calculation, and quality assurance
 - 1.3. Design and development requirements under US EPA, SW 846, "Test Methods for Evaluating Solid Waste," Volume II: Field Manual Physical/Chemical, Chapter Nine, Section 9.1 for statistical analysis and reporting of test results
2. Be sealed and signed by either a civil engineer or a professional geologist registered in the State of California. The civil engineer or professional geologist must be experienced in preparing environmental sampling and analysis plans, correlating XRF and laboratory analytical data, and waste characterization.

5-1C(1) Sampling and Analysis Report

For projects that do not generate surplus or excess surplus material (minimal disturbance), prepare a summary report describing excavation and soil management activities.

The summary report must include:

1. Explanation for using minimal disturbance as part of the excavation work.
2. Description of work performed. Include:
 - 2.1. Date and location material was excavated,
 - 2.2. Date and location material was then replaced
 - 2.3. For constructed vaults, date and location material was placed. Material should be immediately adjacent next to and not extend more than 2 feet away from the vault.
3. Plans showing locations of excavation and placement.
4. A statement justifying that placement of the excavated material will not endanger public safety. For example, the material is placed such that the traveling public will not be able to come in contact with any replaced contaminated soil due to its location within the state highway system or outside a known pedestrian thoroughfare.
5. Seal and signature from either a civil engineer or a professional geologist

registered in the State of California. The civil engineer or professional geologist must be experienced in waste characterization and environmental management.

For projects that generate surplus or excess surplus material, prepare a sampling and analysis report describing excavation, soil management, soil placement and/or disposal activities as directed below.

Submit a draft sampling and analysis report within 15 business days after surplus ADL regulated material has been placed or stockpiled within the project limits.

The sampling and analysis report must include:

1. Location where surplus material was excavated.
2. Location where surplus material was placed or stockpiled.
3. XRF and laboratory analytical test results for the excavated surplus material. Test results must include:
 - 3.1. XRF or laboratory number for each reported sample
 - 3.2. Your number for each sample reported
 - 3.3. Sample collection date
 - 3.4. Date and time samples were received by the laboratory
 - 3.5. XRF or laboratory testing date
 - 3.6. Brief sample description
 - 3.7. Specific test method
 - 3.8. Laboratory extraction method
 - 3.9. XRF and laboratory test results for each sample and method
 - 3.10. Detection limit for each test method
 - 3.11. Explanation of higher laboratory detection limits, laboratory contaminants, or other unusual results
 - 3.12. Samples that failed QC/QA and reason
 - 3.13. Test report date
 - 3.14. Signature and title of laboratory director
 - 3.15. Chain of custody documents
4. A correlation analysis between XRF and laboratory sample concentrations. Correlation analysis must include:
 - 4.1. Tabulated comparison of XRF total lead concentrations to laboratory total lead concentrations and soluble lead concentrations
 - 4.2. A linear regression analysis and graph of XRF total lead concentrations to laboratory total lead concentrations
5. Responses or revisions to address the State Representative's comments.
6. Seal and signature from either a civil engineer or a professional geologist

registered in the State of California. The civil engineer or professional geologist must be experienced in XRF and Laboratory correlation and waste characterization.

Submit the final report within 15 days of receiving the State Representative's comments.

5-1D Disposal Documentation

Submit documentation from permitted disposal facility receiving excess surplus material within 5 business days of transporting excess surplus material from the job site. The documentation must confirm disposal of excess surplus material according to regulations.

6. CONSTRUCTION

6-1A Sampling and Analysis

Collect a minimum of 5 composite excavated material samples for analysis from each truck load prior to transport. Analyze composite samples for total lead using XRF under US EPA Method 6200. Use a "shot" time of at least 60 seconds per sample.

Send one of the composite samples to a laboratory certified under the SWRCB ELAP, for the following additional analysis:

1. Total lead using EPA Method 6010 B
2. Soluble lead using Waste Extraction Test-Citric Acid extraction
3. Soluble lead using Waste Extraction Test-Deionized Water extraction
4. Toxicity characteristic leaching procedure (TCLP)
5. Soil pH

6-1B Dust Control

Prevent visible dust migration during management of ADL regulated material. Use wetting techniques or similar practices to mitigate dust.

6-1C Air Monitoring – Hub Construction

Based on the type of construction activities, trenching and installation of fiber optic conduit does not require air monitoring. For work associated with Hub construction locations, monitor perimeter air at upwind and downwind locations as detailed in the authorized lead compliance plan, when excavation areas containing ADL regulated material border land used for schools, daycare centers, hospitals, or areas of special community concern. Use personal air samplers under National Institute of Safety and Health Method 7082. Sampling procedures must achieve a detection limit of $2.0 \mu\text{g}/\text{m}^3$ of air per day. Under the direction of a

CIH, monitor the air daily while clearing and grubbing, and performing earthwork activities. A representative daily sample must be analyzed for lead by a laboratory accredited by the Environmental Lead Laboratory-Accreditation Program of the American Industrial Hygiene Association. Provide the results to the State Representative within 24 hours.

Make sure daily lead concentrations do not exceed $10.0 \mu\text{g}/\text{m}^3$ of air per day. If a daily concentration exceeds the action level of $2.0 \mu\text{g}/\text{m}^3$ of air per day, stop work and modify the work procedures to prevent release of lead. Make sure the air monitoring data is reviewed and signed by the CIH.

6-1D ADL Material Management

To comply with the ADL Agreement, manage ADL regulated material generated within Caltrans right-of-way as follows. Notify DTSC and obtain regulatory oversight for management of excess surplus regulated material generated outside the Caltrans right-of-way.

6-1D(1) Stockpiling

Do not stockpile excavated surplus and/or excess surplus ADL regulated material:

1. Unless authorized
2. More than 90 days

6-1D(2) Material Placement

Place surplus material as shown or authorized.

6-1D(3) Material Transportation

Transport surplus and/or excess surplus ADL regulated material on public roads outside the controlled access construction zone using a hazardous waste transporter. Make sure the transporter has a current DTSC registration certificate and CA Highway Patrol Basic Inspection of Terminals Program documentation with a satisfactory rating.

Remove loose and extraneous ADL regulated material from outside surfaces of containers and cargo areas of trucks before traveling on public roads outside the controlled access construction zone. Cover and secure the cargo as described in the authorized excavation and transportation plan. Permittee is responsible for costs due to spillage of ADL regulated material during transport.

While transporting excess surplus material on public roads outside of the controlled access construction zone, use:

1. Bill of lading for Type Com material
2. Hazardous waste manifest for Type Z-2 material

6-1E Material Disposal

Comply with the following laws and regulations for disposal of excess surplus ADL regulated material:

1. Health & Safety Code § 25100 et seq
2. 22 CA Code of Regs § 66250 et seq
3. 8 CA Code of Regs

To comply with the ADL Agreement, transport and dispose of excess surplus ADL regulated material generated within Caltrans right-of-way as follows. Notify DTSC and obtain regulatory oversight for management of excess surplus ADL regulated material generated outside the Caltrans right-of-way.

6-1E(1) Type Com Material

Transport and dispose of excess surplus Type Com material at a permitted California Class II or Class III disposal facility.

Permittee is responsible for identifying a California permitted Class II or Class III landfill to receive the material, including any additional sampling and analysis required by the receiving landfill.

6-1E(2) Type Z-2 Material

Transport and dispose of Type Z-2 material at a permitted California Class I disposal facility.

Permittee is responsible for identifying a California permitted Class I landfill to receive the material, including any additional sampling and analysis required by the receiving landfill.