New Mexico DEPARTMENT OF TRANSPORTATION
MOBILITY FOR EVERYONE

SUBJECT: Infrastructure Design Directive
IDD-2018-06
Hazardous Material Investigations

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TO: Office of Infrastructure
District Offices
Transportation Design Community

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FILE REFERENCE:
PSESHARE: Design Directives

The following IDD shall be used to ensure consistency in the development of all projects to be let by NMDOT in relation to Hazardous Material Investigations which are authorized under section 2.2 in the *NMDOT/FHWA Stewardship and Oversight Agreement* (*http://dot.state.nm.us/content/dam/nmdot/Business_Ops/NMDOT-FHWAStewardshipOversightAgreement.pdf*). They are required for all NMDOT and T/LPA projects, regardless of funding source.

The purpose of these investigations is to identify contamination or regulated materials/substances during the design of a project so that a plan to address it during construction may be charted. Greater detail may be found in the Environmental Geology Sections (EGS's) *Hazardous Material Assessment Handbook*. http://dot.state.nm.us/content/dam/nmdot/PM/2010HMAH.pdf

This directive contains instruction regarding how to determine if hazardous material investigations are warranted, to whom and when to submit a request for a hazardous material investigation, and charting a path through construction when contaminants and/or regulated materials are known to exist within the project limits. Details of each are discussed in the following sections.

1) How to determine if hazardous material investigations are warranted:

   Whether or not hazardous material investigations are warranted depends entirely on the design scope and the project location. Such investigations are triggered if **ANY or ALL** of the following apply:

   1A. Property will be acquired;
   1B. Soil will be disturbed; particularly in an urban and/or non-residentially developed area; and/or
   1C. If structures will be demolished (buildings, bridges, etc.)

   For NMDOT projects, if none of the above apply, then no hazardous material investigations are warranted and no further action is necessary. If any or all apply, proceed to No. 2.

   For T/LPAs, some level of hazardous material investigation is required for all T/LPA projects. If none of the above apply, then an ISA Determination must be submitted to the EGS for concurrence/acceptance. Contact the EGS for guidance. If any or all apply, proceed to No. 2.

2) To whom and when to submit a request for a hazardous material investigation:

If any of the triggers in step 1 applies, the Project Development Engineer must submit a written request for evaluation to the EGS, or the Environmental Professional working on behalf of the T/LPA. The request must include the scoping report, detailed descriptions of each of the triggers, the project schedule, and any specific concerns.

Hazardous material investigations may be initiated as early as STIP Planning and are typically completed well before the 90% design. With time and as the design is developed, the investigations become increasingly focused and the findings are evaluated for their effect, ultimately on construction. The result is project specific recommendations intended to minimize the risk to the NMDOT (or T/LPA) during construction posed by time delays and cost overruns, contaminant releases and exposure to staff and the public, regulatory fines, and damage to the NMDOT's (or T/LPA's) credibility.

Hazardous material investigations are timed to provide the level of information needed at each corresponding design stage. This relationship is illustrated in the table below. As these investigations take time to complete, timely submittal of requests is critical.

Design Stage	***Assessment Phase***	***Comments***
STIP Planning and Preliminary Project Definition	Pre-Initial Site Assessment (pISA)	The pISA alerts the design team of areas of concern that could present significant obstructions or added cost to the project. Absent a design scope, the data evaluation is limited to a visual comparison for overlap between the pISA findings and the project limits.
Preliminary Design (30 to 60%)	Initial Site Assessment (ISA) and Preliminary Site Investigation (PSI)	The ISA is typically performed at the beginning of the design phase, after the conceptual design is complete. The goal is to identify and evaluate specific properties that could adversely affect the project and, to the extent possible, chart paths through design and construction to address particular concerns. If conclusions cannot be drawn or paths cannot be charted with confidence, a PSI may be recommended. The PSI is focused on specific areas of concern and utilizes invasive (field sampling and analysis) and/or non-invasive (magnetic surveys) testing methods. With respect to contaminants in soil, if conclusions cannot be drawn or paths cannot be charted with confidence, a DSI may be recommended.

Design Stage	*Assessment Phase*	*Comments*
90% Design	Detailed Site Investigation (DSI)	The DSI focuses on the lateral and vertical extent of contamination in soil within the limits of a project. Through invasive sampling techniques, the horizontal and vertical limits of contamination are defined.

3) Charting a path through construction:

The pISA, ISA, PSI, and DSI reveal contaminants and/or regulated materials existing within the limits of a project. The EGS (or other environmental professional) evaluates these findings and charts a path through construction. Via the recommendations, the EGS (or other environmental professional) advises the Project Development Engineer to:

3A. Insert project specific alerts and instruction into the design plan set;
3B. Estimate volumes of contaminated soil requiring excavation and enter the volume in the Summary of Quantities; and
3C. Insert project specific special provisions or notices to contractor into the contract book.