



01 April 2024

Nonrule Policy Document Waste-0078-NPD-R1
Peggy Dorsey, Assistant Commissioner
Office of Land Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, IN 46204
Attention: Chris Bowman

**RE: Comments on WASTE-0078-NPD-R1
Excess Liability Trust Fund Cost Guidance**

Acuity Environmental Solutions, LLC (AcuityES) has reviewed the proposed nonrule policy document (NPD) WASTE-0078-NPD-R1, Excess Liability Trust Fund Cost Guidance, and we feel that the expanded list of tasks with pre-defined rates will promote shared expectations, which will serve to expedite the claims process. AcuityES appreciates the opportunity to share our professional perspective and offer the following comments and suggestions.

GENERAL COMMENTS

AcuityES's understanding of the roles and level of expertise associated with the personnel classifications is based on the activity descriptions in 328 IAC 1-3-5(f) that are in effect as of the time of this NPD comment period.

Several of the NPD tasks incorporate hours for word processing and clerical support. However, based on prevailing expectations surrounding report preparation and delivery, the duties of the word processor/clerical person, including word processing/data input; documentation reproduction, report binding, and filing; and proofreading/editing, have become obsolete. It is unclear what is encompassed in the clerical support hours considering that clerical work outside of contributing to a deliverable is inherently an indirect or overhead cost. Pursuant to 328 IAC 1-3-5(d)(15) costs that are not reimbursable from the fund include those "not directly related to site characterization, corrective action, or ELTF indemnity claims or otherwise determined not to be reimbursable under this rule as a result of a financial or technical review."

AcuityES would like to suggest removing the personnel category of Word Processor/Clerical from calculations for task totals and reallocating the equivalent time to the Project Manager and Drafting Person personnel categories. Technical document preparation is provided by the Project Manager, figures are generated by the Drafting Person, and final report review/approval is a Senior Project Manager activity. In practice, a Word Processor/Clerical person role does not have the technical knowledge to assist in composing reports.

Several tasks refer to bid solicitation as being fulfilled by the Staff Project Person. However, acquisition and negotiation of contractors is listed as a Senior Project Manager activity, and the coordination of subcontractors is listed as a Project Manager activity. The activity descriptions for the Staff Project Person category do not include work related to subcontractors or preparing requests for proposals (RFPs). Because

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ACUITY Environmental Solutions

7965 East 106th Street, Suite 128
Fishers, IN 46038

phone: 317 / 570-4919
fax: 317 / 570-4943

email: info@acuityes.com
web: www.AcuityES.com



a complete understanding of the scope of services required for investigation or remediation objectives is essential to produce accurate and complete bids, the Senior Project Manager role would be best suited to prepare subcontractor RFPs.

Standardized fixed costs are most appropriate for services that have clearly defined expectations and that include components that are replicable and not situationally dependent. In the essence of streamlining the claims process, pre-defined rates will be most helpful for common, routine aspects of LUST projects. The time and attention that would need to be devoted to negotiating base rates for tasks with intrinsic variability is not worth the limited utility of hypothetically agreed-upon totals, and it makes more sense to take a case-by-case approach.

AcuityES has identified several NPD tasks that are not good candidates for default fixed rates due to inherent variability of implementing the tasks across different circumstances. In particular, the Corrective Action Implementation Plan tasks (TASK B) are not suitable for pre-defined rates because, in the comparatively few instances when a Corrective Action Plan (CAP) is requested and implemented, the work involved in the selected remedy is too variable and contingent on site-specific factors. The variability leads to discrepancies in the amount of labor entailed to complete the given task and therefore leads to discrepancies between the expected deliverable or documentation IDEM expects to receive for completion of the given task. Therefore, it is difficult to provide an expectation of the activities that will occur under the given task and the expected deliverable/documentation that IDEM will receive, which will create incongruent expectations between IDEM and consultants. These tasks are best discussed with the IDEM PM and technical staff on a case-by-case basis prior to implementation to reach a consensus on the level of effort entailed and the expected deliverables and documentation.

AcuityES has also identified tasks that lack a definitive scope or outcome and will need to be clarified before a consensus can be reached on the realistic/reasonable level of effort required for the task. For instance, Task E.2 Tank Installation – Planning/Preparation requires a significant degree of additional detail to understand what is meant by “coordination” and “project management.” The role that the environmental consultant fulfills is undefined other than filling out State Form 45223.

COMMENTS BY SECTION

TASK A: Site Characterization and CAP Development

TASK A.1: Investigation Work Plans

TASK A.1.a: Work Plan for Site Investigations

The definition of what exactly constitutes a Work Plan has not yet been defined sufficiently to comment on whether the estimated labor involved in producing a Work Plan is realistic. Furthermore, a consistent interpretation of the concept of “adequate delineation” needs to be established across IDEM personnel before a fixed rate can be applied to a task involving decisions about how to achieve adequate delineation. This is especially true at sites where subsurface conditions are already well understood, where residual contamination related to a prior incident is known and controls have already been instituted, and where exposure pathways have already been ruled out by virtue of the site physical setting and hydrogeologic conditions established during prior investigations.

TASK A.1.b: Work Plan for Vapor Investigations

AcuityES concurs with the estimate for this task.



TASK A.1.c: Work Plan for High Resolution Site Characterization

AcuityES does not consider this task to be a suitable candidate for a standardized fixed rate. The application of high-resolution site characterization (HRSC) is intrinsically site-specific and too variable and infrequent to warrant a predefined rate for a work plan.

TASK A.2 Soil Boring Advancement & Monitoring Well Installation

To ensure data quality objectives are met during soil boring investigations and monitoring well installation, a technician should also be allowed to support the Staff Project Person in field work. To collect soil subsamples for laboratory analysis of volatile organic compounds (VOC) with minimal soil disturbance and minimal time between core retrieval and sampling, while simultaneously allowing "sufficient time between subsurface soil core retrievals to avoid sampling backlogs" per Section 2.2.4 of the R2, a second person is necessary. The Staff Project Person is already responsible for logging the lithology of the soil, field screening the soil with an appropriate instrument (i.e., photoionization detector), making real-time sampling decisions and communicating with the drilling subcontractor. Assistance from a technician enables the sampling procedure to be followed efficiently so that drilling can proceed without being limited by the speed of the individual performing the sampling procedure.

If the unit basis for this task is the borehole length in feet, the field work reimbursement rate should be adjusted to a sliding scale based on the depth relative to ground surface. The deeper the drilling tooling is advanced at a boring location, the longer it takes to retrieve the soil core and continue to the next depth interval. It would be more appropriate to define the unit rates by depth ranges (such as 1-10', 10-16', 16-24', 24-32') with a rate increase at each successive depth range.

The activities described for consultant work are mainly independent of the drilling technique, so AcuityES is uncertain how the numerical cost factor was established for these tasks when drilling with a hollow stem auger (HSA) compared to using direct push technology (DPT).

The reference to "one-half hour for every soil sample recovered from each borehole" should be clarified. Is it meant to include each subsample that was selected for laboratory for analysis or is the time for every aliquot collected even if field screening later results in the decision to discard it and not submit it for laboratory analysis?

TASK A.2.a: Soil Borings

In addition to the comments above, this task does not make the distinction between a permanent monitoring well and a temporary monitoring well/piezometer. If temporary monitoring wells/piezometers are installed for the collection of grab groundwater samples or static water level measurement to estimate a local potentiometric surface, would that fall under Task A.2.b? Compared to soil probes advanced only for soil classification and sampling, additional materials are needed for temporary wells and additional time is required to allow for well recharge. A distinction should be made to avoid confusion.

TASK A.2.b: Groundwater Monitoring Well Installation

Same comment as above.

TASK A.2.c: Groundwater Monitoring Well Development

AcuityES concurs with the estimate for this task.



TASK A.2.d: Monitoring Well Network Survey

AcuityES concurs with the estimate for this task.

TASK A.2.e: Installation of Vapor Points/Probes

AcuityES recommends defining a unit rate per location for vapor pins. Defining an amount per foot does not make sense when vapor pins are installed in a concrete slab and an impact/hammer drill is used to drill through the concrete slab into the sub-slab fill. Additionally, language regarding the use of a drill rig for vapor pin installation should be removed because coring is performed with an impact/hammer drill and not a drill rig. Furthermore, disposal of groundwater should not be a consideration for vapor investigation or installation of vapor sampling points.

Because vapor intrusion investigation is mostly prompted by the prospect of vapor intrusion at neighboring properties, time should be included for the Project Manager for Planning and Preparation in order to perform site work preparation and planning involved in coordinating schedules with offsite property owners where vapor points/probes will be installed. Also, the task does not currently include but should incorporate time for procurement of vapor pin supplies. An additional two hours is suggested.

TASK A.2.f: High Resolution Site Characterization (HRSC)

This task is not a good candidate for standardized rates because the application of HRSC at a given site is too variable. Site settings that are complex enough to warrant HRSC over conventional characterization are the exception, making a generic framework for time involved in planning and executing an HRSC investigation difficult to adhere to.

The data resolution needed to achieve adequate characterization for confident quantification of risk at LUST sites is most often accomplished with conventional site characterization methodologies. Further deliberation surrounding an HRSC task total is not worthwhile given the infrequency of its application combined with the variability of the effort involved.

TASK A.3: Site Investigation Reports

TASK A.3.a: Initial Site Characterization (ISC) Report Preparation

An ISC Report following the LUST ISC Report Cover Sheet and Report Format (State Form 55439) is not always deemed necessary or requested by IDEM Project Managers. Frequently, a Limited Subsurface Investigation (LSI) Report is requested in response to a confirmed release, so a tangible definition of an LSI and a corresponding task total to complete an LSI report should be included in this NPD.

TASK A.3.b: Further Site Investigation (FSI) Report Preparation

As described in the scope of work for this task, the labor involved in producing an FSI report is based on the assumption that an ISC was completed first, which as stated above is not always the case. In the instances where "information in the ISC Report can be duplicated," AcuityES concurs with the overall estimate for the task, but in the absence of a prior submittal that can serve as a foundation to be adapted, the total task hours are not sufficient. If it is necessary to generate/compose components that would have been reproduced from an ISC to complete the FSI report in accordance with the LUST FSI Report Cover Sheet and Report Format (State Form 55441), then the equivalent hours defined for the corresponding component of an ISC should be incorporated into the FSI report preparation task.



One of the activities included in the task is “recommendations for additional site characterization activities,” which seems to contradict the expectation that one comprehensive FSI report should be provided after characterization of nature and extent has been accomplished. It is IDEM’s policy that “if delineation requires more than one mobilization and sampling event, the owner or operator should continue with delineation until the delineation process is completed and then submit a comprehensive FSI Report within the 365-day deadline set by IDEM. Interim report and work plan submittal and IDEM review is not required.” However, to receive pre-approval for an additional mobilization, ELTF requires justification to be provided for the proposed activities in Scope of Work submittals. It is unrealistic to expect concurrence regarding appropriate next steps for an investigation without first presenting findings from the latest event. Without reviewing an interim report or at least the basic components thereof with MDDRs, which enable IDEM to validate the information driving the need for additional mobilizations, an informed decision cannot be made about the necessity and cost effectiveness of additional step-out investigations.

Considering the inconsistency in the interpretation of “delineation” that AcuityES has observed between IDEM PMs, we feel that a mechanism should be in place to document the prevailing CSM of a LUST site as data are gathered during step-out iterations to facilitate agreement pertaining to necessary next steps. A systematic approach needs to be developed for deciding whether further site investigation is necessary, which includes defining task specific MDDRs that are necessary to make the decision. In our experience, the discrepancies between project trajectories have arisen based on the value placed on different forms of information by different IDEM PMs. In some cases, decisions are made solely based on empirical sampling data in the form of laboratory analytical results and achieving “delineation” essentially equates to stepping out until samples yield no analyte detections, disregarding the physical plausibility of exposure mechanisms and discounting knowledge about site specific factors that influence expected plume behavior ascertained from previous or nearby investigations. In other hydrogeologically similar LUST incident situations, judgment calls have been made to discontinue stepping out because IDEM took the decision unit use (present and reasonably expected future use) into consideration and concluded that additional information was unnecessary because it would not change the outcome of risk characterization, and thus “adequate delineation” had been achieved.

TASK A.4: Environmental Restrictive Covenant (ERC)

TASK A.4.a: Preparation and Recordation of an ERC

AcuityES concurs with the estimate for this task.

TASK A.4.b: Affected Area Map Preparation

AcuityES concurs with the estimate for this task.

TASK A.5: Corrective Action Plan Development

Task A.5 is referred to as “Correction Action Plan Development.” If this task group is not removed entirely from later versions of this NPD, then it should be changed to “Corrective Action Plan Development.”

These tasks are not good candidates for standardized rates because of the drastic variation in type and magnitude of remedial alternatives. This variation creates large discrepancies in the level of effort to produce each work plan.

TASK A.5.a: Corrective Action Plan (CAP) Preparation for a Non-Engineered Remedy

See comment above.



TASK A.5.b: Corrective Action Plan (CAP) Preparation for an Engineered Remedy

In addition to the comment above, CAPs with an Engineered Remedy are no longer routinely requested, so it is not worthwhile to contemplate a fixed rate.

TASK B: Corrective Action Plan Implementation

These tasks are not good candidates for generalization and cost standardization. AcuityES recommends omitting the activities of Task B entirely, however if it is decided that remedial alternatives should be assigned fixed rate totals, we have provided our insight accordingly.

TASK B.1: CAP Planning/Preparation & Field Work

TASK B.1.a: Contaminated Soil Excavation

As stated in the general comments, the role of a Staff Project Person does not encompass preparing RFPs. Furthermore, soil source removal is fast-paced and requires constant feedback based on conditions encountered throughout the event so that real time decisions can be made to ensure remedial objectives are achieved. Time needs to be included for the Project Manager or Senior Project Manager to communicate with onsite personnel and offer remote oversight during excavation because the outcome and ultimate success of the endeavor depends on the seasoned professional's input. It is not cost effective for excavation oversight to be performed by the Project Manager or Senior Project Manager so, at a minimum, time needs to be allotted to consult with staff to provide project direction/instructions that allow for real-time decision making.

TASK B.1.b: Injection of In-Situ Chemical Oxidation Solutions

This task is not a good candidate for standardization considering its infrequency and variability. AcuityES's experience with projects involving injection of oxidants has almost exclusively been for treatment of chloroethenes, but based on past project experience, one hour for project management is a significant underrepresentation of what required. Project Managers need to consider access, water availability for reagent mixing, utilities, and coordination with contractor(s). Regarding staff fieldwork, an 8-hour day is the minimum, but realistically days are 10 hours plus travel time. It is unclear why this task defines an event as lasting for 8 hours without considering the number or spacing of injection locations. If this is not removed from the NPD tasks, clarification is needed for how to account for injection events that last more than one day.

TASK B.1.c: Vacuum Truck Event

AcuityES concurs with the estimate for this task.

TASK B.2: Corrective Action Plan Implementation (CAPI) Report

TASK B.2.a: CAPI Report Preparation for a Non-Engineered Remedy

For any form of remedial design implementation, an explanation of the activities undertaken and the metrics for performance indicators in the context of achieving remedial objectives is warranted. The personnel with the expertise/credentials to design the remedy should be the predominant contributor to the report, which is not reflected in the proportion of hours by labor class for this task. If this task is left in the NPD, additional clarification should be provided to define the expected report deliverable.



TASK B.2.b: CAPI Report Preparation - Remediation System (As-Built and Start-Up)

For an engineered remediation system, the total hours are far too low. Additionally, there is no time defined for an engineer, and a senior PM only has 5 hours. AcuityES feels that this drastically underestimates the time needed to compose a meaningful implementation report, however, the expectations for a final product are not well understood.

TASK C: Groundwater Monitoring / System Maintenance / Vapor Intrusion Sampling

AcuityES disagrees with the allowance of only one technician during field work activities. AcuityES proposes two technicians be allowed for groundwater and vapor intrusion investigation field work to assist in all activities, which will ensure data quality and safety. For activities with location-based unit rates, work can be conducted by two personnel concurrently at neighboring locations but both individuals should be allowed time to mobilize to the project site.

TASK C.1: Groundwater Monitoring Sampling

Same comment as above.

TASK C.1.a: Groundwater Monitoring Sampling Planning/Preparation & Field Work

Same comment as above.

Additionally, a task needs to be included for the time required to measure static water levels. In order to fulfill the Quarterly Monitoring Report (QMR) task in accordance with the LUST format, ground water flow interpretations must be presented.

TASK C.1.b: Quarterly Monitoring / Remediation Status Report Preparation

We suggest that the two hours for Word Processor/Clerical be allocated to the Project Manager and Drafting Person.

TASK C.2: Operation and Maintenance of Remedial Systems

AcuityES strongly suggests not attempting to standardize this. There are too many factors related to the type and size of system, the type of equipment/instrumentation, and whether/how water is being treated that affect the time and effort required to perform this task for there to be a generalized task total.

TASK C.2.a: Remediation System Operation and Maintenance

The frequency of maintenance tasks should be defined by the manufacturer's specifications for each piece of equipment rather than "one site visit per month." Failing to perform maintenance on major components at the correct intervals defined in the O&M manuals will increase the incidence of Task C.2.b.

Decisions regarding system configuration adjustments to optimize performance should be made by the credentialed professional rather than the Staff Project Person. Additional time is recommended for the Project Manager to assess performance indicators and develop plans for optimization, in lieu of the Staff Project Person.

TASK C.2.b: Non-Scheduled Remediation System Maintenance

This is highly site-specific and does not warrant a base rate.



TASK C.2.c: Review of Telemetry Reports

Considering that remote telemetry reports typically consist of equipment status, in-line transducer readings, and elapsed hour meter readings, it is unclear what the objective of interpreting this information is intended to be.

TASK C.2.d: Remediation System Permit Report Preparation

This is highly site-specific, too vague, and does not warrant a base rate.

TASK C.3: Vapor Sampling Planning/Preparation & Field Work

Unit rates based on a per sample basis do not accurately reflect the time to complete the sampling event. For instance, to conduct indoor air sampling in a residence, the sampling duration is 24 hours while for a commercial property it is 8 hours. For a small number of samples, it will take longer to set up the sample canisters, complete the necessary pre-sampling checklist and field forms, and to pack and ship the samples to laboratory than the time allotted using the per sample unit rate. Conversely, if 10 samples were collected in a medium sized commercial building, using the per-sample unit rate would yield 21.5 hours, which is much more time than the approximately 10-12 hours actually required to complete the task.

As previously stated, a second field technician should be allowed for the collection of vapor samples. It is irresponsible to send a technician alone into a private residence and constitutes a safety issue that is alleviated by having a second field person. Additionally, AcuityES suggests separating exterior soil gas and conduit vapor from indoor air, sub-slab gas, crawl space air since the latter tasks may require access coordination to access off-Site properties and generally require more effort to schedule.

Please clarify what is expected for waste disposal at vapor sampling sites.

TASK D: Site Closure Activities

TASK D.1: No Further Action (NFA) Reports

TASK D.1.a: NFA Request with Unconditional Closure

We do not foresee a circumstance where this would be necessary or requested, so having a task-based rate is not necessary.

TASK D.1.b: NFA Request using Lines of Evidence

When developing lines of evidence in support of no further action, 34 hours is more realistic for a Project Manager. The level of effort to make a convincing case for incident closure using lines of evidence without the confidence that comes with exposure pathways being decisively controlled institutionally. In our experience, IDEM has not readily entertained closure with contamination remaining above unconditional closure levels without an ERC, despite robust lines of evidence, and it is considerably easier to achieve NFA status when an ERC is used. The labor breakdown and task total for the D.1.c task is more realistic for the level of effort required for requesting NFA using lines of evidence.

TASK D.1.c: NFA Request Report with Environmental Restrictive Covenant

We suggest switching the hours with Task D.1.b NFA Request using Lines of Evidence. Also, it should be clarified when a standalone submittal is expected instead of requesting NFA in the final quarterly monitoring report.



TASK D.2: Site Restoration Activities

TASK D.2.a: Remediation System Decommissioning & Site Restoration Planning/Preparation

Additional time is needed for the Project Manager to do calculations and to prescribe expectations in preparation of the bid package to ensure comparable bids are received. 20 hours is more realistic for a Project Manager, however, we believe this task is difficult to standardize.

TASK D.2.b: Permanent Well Closure Planning/Preparation and Field Oversight

Task expectations should be defined for waste disposal during well abandonment. AcuityES is uncertain why a total of eight hours was selected for well abandonment field oversight irrespective of the number and size of wells being abandoned. We suggest developing unit-based totals that are commensurate with time required for the driller being overseen to perform the abandonment.

TASK E: Tank Closure and Replacement

TASK E.1: Tank Closure

TASK E.1.a: UST Decommissioning & Removal – Planning/Preparation

In our experience and based on our understanding of the environmental consultant's expected level of involvement in planning a UST pull, the Project Manager time is insufficient. At a minimum, we would expect the Project Manager to enlist a subcontractor certified in decommissioning, arrange for transportation and disposal (and/or stockpiling) of environmental media, including setting up a waste profile, and communicate with interested parties and project personnel. Performing these activities in four hours is not attainable. The time for the Staff Project Person should also be increased to include procuring sampling media and supplies/incidentals.

TASK E.1.b: UST Closure Report Preparation

The Project Manager should be allocated 32 hours to complete this task. A Drafting Person also needs more time to prepare figures with the sidewall and bottom sample locations. Data compilation needs to be defined— is this table preparation? This task may be difficult to standardize because the number of samples collected, and hence the amount of information to document, varies significantly depending on the former UST system's configuration and the amount of over excavation involved.

TASK E.2: Tank Installation – Planning/Preparation

It is premature to attempt to define this task and the labor involved with it. Other than preparing State Form 45223, which has a clear deliverable, the duties that IDEM expects the environmental consultant to fulfill are not well understood.

TASK F: ELTF Claim Preparation

AcuityES generally concurs with the estimate for this task, however in some instances, it has been difficult to adhere to this budget when the claim application produces VBA runtime errors.

TASK G: Miscellaneous Tasks

TASK G.1: Field Work Notification

AcuityES concurs with the estimate for this task.



TASK G.2: Health and Safety Plan Preparation

AcuityES recommends providing a citation for what IDEM deems to be a complete and acceptable HASP.

TASK G.3: Utility Clearance Coordination

AcuityES concurs with the estimate for this task.

TASK G.4: Access Agreements

AcuityES concurs with the estimate for this task.

TASK G.5: Meetings with Regulatory Agency Staff

AcuityES concurs with the estimate for this task.

Appendix A: Personnel and Labor Rates

AcuityES concurs.

Appendix B: Laboratory Analytical Costs

AcuityES concurs.

Appendix C: Equipment Rental

AcuityES concurs.

Appendix D: Drilling Costs (Borings and Wells)

Drilling subcontractors would best be able to provide comment on their costs.

Appendix E: Well Abandonment

The word "Statutes" is misspelled. Also, because the volume of various sizes of environmental wells is proportional to the square of the well radius, the amount of material required for abandoning wells varies proportionally to the square of the radius. Defining one cost rate per foot for well sizes between 2" and 6" in diameter does not account for the nine-fold difference volume that needs to be plugged. It would make more sense to differentiate prices at more discrete intervals of well diameters.

Appendix F: Utility Locate

Ground penetrating radar (GPR) should also be added as an approved method. Electromagnetic methods alone cannot identify all underground utilities, structures, or anomalies which may preclude an area from boring advancement. Using GPR, professional locators can identify nonconductive features such as thermoplastic piping or fiberglass reinforced plastic piping.

We look forward to continued collaboration with IDEM and ELTF in refining the ELTF Cost Guidance NPD.

Lauren Nielsen *Mike Grzegorek* *Jackie Humphress* *Aunna Huber Fadness*

Lauren Nielsen, P.E. Senior Project Engineer lnielsen@acuityes.com 206-914-8802	Mike Grzegorek, CHMM Project Manager mgrzegorek@acuityes.com 317-863-4685	Jackie Humphress, MSEE, EI Project Engineer jhumphress@acuityes.com 317-294-8506	Aunna Huber Fadness, MSES Senior Project Manager ahuber@acuityes.com 317-863-4691
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