



# Permit to Construct Modification Application

## Public Information Summary

for

**US Ecology Idaho, Inc.**

**Grand View**

Pre-Permit Construction  
Approval Requested

Application will be submitted to:

**Idaho Department of  
Environmental Quality**

Air Quality Division

1410 N. Hilton, Boise, Idaho 83706

By:

**US Ecology Idaho, Inc.**

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## Why is a Public Information Summary being provided?

US Ecology Idaho (USEI) is applying to modify its air quality permit to construct (PTC) to allow construction of a new waste Stabilization Building and outdoor drum storage area at USEI's hazardous waste treatment, storage, and disposal site near Grand View, Idaho.

USEI is requesting pre-permit construction authorization from the Idaho Department of Environmental Quality (DEQ) for this project, which would allow construction to begin before the final permit is issued. No wastes may be processed in the building until DEQ issues the final permit.

Soon after an application is received, DEQ will post the application on the DEQ website along with a notice offering a 15-day period during which any member of the public may request that a 30-day public comment period be held when the draft permit is issued.

Idaho's rules for preparing an application requesting pre-permit construction authorization require that USEI hold a public information meeting within 10 days after submitting the application to provide interested members of the public an additional opportunity to learn more about the project. Under normal circumstances, USEI would hold the public information meeting at an easily accessible location in nearby Bruneau.

The recent rise of the coronavirus disease COVID-19 pandemic, however, has prompted cancellation of events where people might gather. On March 3, 2020, Idaho Governor Brad Little declared a state of emergency in Idaho due to the pandemic. Recent news reports about individuals testing positive for COVID-19 even though they had no symptoms of the disease are particularly concerning.

In light of these very unusual events, DEQ has approved an alternate approach proposed by USEI to post information about the project on the USEI website and to hold a scheduled call-in meeting for members of the public to ask questions about the project rather than holding a public meeting at a location near the Grand View site. This will offer interested members of the public a means to learn more about the proposed project at USEI without potentially being exposed to the virus. DEQ staff will not be available on this call.

A notice was published in the Idaho Statesman, Mountain Home News, and the Owyhee Avalanche on March 25, 2020 that included a link to this information summary as well as the details for the call-in meeting:

Link to the Public Information Summary

<https://www.usecology.com/location/us-ecology-idaho>

Scroll down to "Relevant Resources"

Call-in Meeting

Tuesday, March 31, 2020

6:00 pm – 8:00 pm

Toll-free: (888) 895-6448

Access code: 1358295915

Because the call-in meeting will be held a few days after the application has been submitted to DEQ, the application is expected to be readily available for download prior to the meeting. To sign up for an email notification from DEQ when the application is posted on their website,

please go to <https://www.deq.idaho.gov/news-public-comments-events/> and click on the “Subscribe to this page” icon located in the upper right hand corner of your screen.

## Scope of the Air Quality Permit to Construct Application

Air emissions at the USEI Grand View solid and hazardous waste disposal facility are currently subject to the requirements contained in Permit to Construct (PTC) P-2008.0012, Project 61436, issued December 30, 2014.<sup>1</sup>

The proposed changes at the facility include constructing a new, smaller waste Indoor Stabilization Building and a new adjacent drum storage canopy to replace the Containment and Waste Stabilization Building(s) which were badly damaged in a steam explosion in November 2018. In addition, USEI has identified two small used oil-fired heaters which were exempt from permitting when installed but which USEI wants to include in the permit to accurately reflect the emissions sources at the site.

Just as in the previous building, wastes in the new Indoor Stabilization Building will be stabilized in one of two mixing tanks in preparation for storage or disposal at the site. Particulate emissions from processing wastes will be controlled by two baghouses. Emissions of volatile compounds are limited by restrictions on the amount and types of wastes that may be processed in this building and operational practices that reduce the potential for volatiles to be released.

No changes are proposed to the processes or types of wastes that will be processed compared to previous operations.

## General Facility/Project Description

Wastes are trucked to USEI where they may be directly disposed in onsite landfill cells or treated prior to storage and disposal. Stabilization and treatment processes may be conducted within the new Indoor Stabilization Building or at the existing Outdoor Stabilization Facility. USEI’s hazardous waste permit issued under the Resource Conservation and Recovery Act (RCRA), however, requires that processing materials containing “fine wastes” must be conducted in the new Stabilization Building. Treatment methods include stabilization, micro- and macro-encapsulation, chemical oxidation or reduction, deactivation, neutralization, precipitation, adsorption, bioremediation, evaporation, size reduction, and decanting to reduce solubility and leachability of contaminants in the waste.

In the new Indoor Stabilization Building, wastes will be transferred into one of two mixing tanks or pits directly from trucks, roll-off bins, or by front-end loader. Stabilization reagents or additives are then added to the tanks. Common reagents include lime, cement, ferrous sulfate (FeSO<sub>4</sub>), and clay. Lime or cement is transferred from nearby storage silos using a pneumatic or screw auger system. Other reagents are added in bulk. An excavator or backhoe is used to mix the wastes and reagents and to transfer the processed/ stabilized material out of the mixing tank into a transport vehicle for further handling or disposal.

Wastes received for treatment are often in the form of sludges with relatively high moisture content or as solid debris. Water spray bars will be located slightly above and on two sides of each of the treatment pits to control dust from materials determined to contain “fine wastes.”

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<sup>1</sup> The current permit and statement of basis may be accessed on DEQ’s website at <https://www.deq.idaho.gov/permitting/issued-permits/>

Retractable vinyl curtains will also be provided to control emissions from each pit. A hood collector will be located above each treatment pit, ducted to one of two dedicated 25,000 cubic foot per minute (cfm) baghouses with minimum 99.5% capture efficiency for fine particulate matter, PM<sub>10</sub> and PM<sub>2.5</sub>.<sup>2</sup> The baghouse serving each treatment pit will be operated any time materials containing “fine wastes” are being handled in that pit, when sizing operations that might generate dust are conducted near the pit, and may be operated when handling other types of wastes.

Micro- and macro-encapsulation of hazardous debris will occur within the building. Wastes to be micro-encapsulated do not include materials containing “fine wastes.” Micro-encapsulation is typically conducted in the treatment pits in a manner similar to the stabilization process. Micro-encapsulation may also be performed in a variety of smaller mixing vessels. Macro- and micro-encapsulation activities outside the treatment pits will not be conducted when loading, mixing, or unloading is being done either of the treatment pits.

Activities within the new building to reduce the size of debris prior to encapsulation will include using saws, hammers, cutting torches, or an excavator with attachments such as a jackhammer.

Emission points for the new Indoor Stabilization Building include the two baghouse stacks and emissions from open rollup or coiling doors.

The two existing heaters onsite that burn used oil meet the requirements of 40 CFR 279.23, i.e., the heaters burn only used oil generated onsite or received from household do-it-yourself used oil generators, the maximum capacity of each heater is not more than 0.5 million British thermal units per hour (MMBtu/hr), and the combustion gases from the heaters are vented to ambient air. When the facility runs out of used oil during the winter, the heaters are fueled with diesel.

The heater located in the New Maintenance Shop has the capacity to burn 3.6 gallons per hour (gal/hr) of fuel (0.493 MMBtu/hr), and the heater located in the Quonset Hut can burn up to 2.5 gal/hr of fuel (0.343 MMBtu/hr). Each heater has a stack that extends through and above the roof of the building.

## “Fine Wastes” Management

USEI’s RCRA permit<sup>3</sup> requires that materials meeting the definition of “fine wastes” or that might generate “fine wastes” during handling, treatment, or stabilization be managed within the Indoor Stabilization Building (RCRA Permit Condition XI.B.2). The first step in determining whether a material contains “fine wastes” is the paint filter test (EPA Method 9095B), where the amount of a waste material sample that can pass through a Mesh #60 +/- 5% conical paint filter is measured. This mesh specification corresponds to an opening size of 250 microns (µm) +/- 12.5 µm. If none of the material sample contains particles less than 250 µm in size, the waste may be managed at the Outdoor Stabilization Facility.

In the next step, wastes that are determined to have a moisture content greater than 10% or if less than 25% of the sample passes through a #25 mesh hand sieve (710 µm), the waste may be managed at the Outdoor Stabilization Facility.

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<sup>2</sup> Particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) or 2.5 microns or less (PM<sub>2.5</sub>).

<sup>3</sup> USEI’s current RCRA permit (all modules) can be accessed on the DEQ website at <https://www.deq.idaho.gov/permitting/>

In the third step, if less than 25% of the sample passes through a #200 mesh sieve (75 µm) using ASTM Method C 136-06, the waste may be managed at the Outdoor Stabilization Facility.

Wastes with a moisture content of 10% or less and for which more than 25% of the waste sample is smaller than 75 µm must be managed in the Indoor Stabilization Building.

The RCRA permit requires that the air pollution control device (i.e., baghouse) be operating any time waste operations might generate “fine wastes” (RCRA Permit Conditions X.A.2.a.(2) and XI.C.2.e).

## Emissions

Potential emissions of “criteria pollutants,” meaning PM<sub>10</sub>, PM<sub>2.5</sub>, carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and sulfur dioxide (SO<sub>2</sub>) from processes in the new Indoor Stabilization Building and the two used oil space heaters were below regulatory concern (BRC) as defined in Section 221.01 the Idaho Air Rules.<sup>4</sup> No further analysis was required for emissions of these pollutants.

Potential emissions of another criteria pollutant, lead, from waste processing in the new Indoor Stabilization Building slightly exceeded the BRC threshold. Atmospheric dispersion modeling was conducted for facility-wide emissions of lead to ensure that offsite ambient impacts were below the applicable National Ambient Air Quality Standard (NAAQS).

Unlike many surrounding states, Idaho also regulates emissions of state-only toxic air pollutants (TAPs). Regulated TAPs include noncarcinogenic pollutants subject to 24-hour standards, and carcinogenic pollutants subject to annual standards. These standards are listed in Sections 585 and 586 of the Idaho Air Rules.

Potential emissions of 35 regulated particulate TAPs and 281 regulated volatile TAPs from processes at the new Indoor Stabilization Building and 29 regulated TAPs formed during combustion of fuel oil in the small space heaters were compared to the applicable screening emissions level (EL) listed in the Rules. No further analysis was required for pollutants with emission rates below the applicable EL.

## Atmospheric Dispersion Modeling

As noted above, atmospheric dispersion modeling was conducted for facility-wide modeling of lead. Modeling was also conducted for TAPs with emission rates exceeding the applicable screening ELs. Maximum modeled ambient impacts occurred at the facility fence line.

## Conclusions

The technical analysis prepared in support of the permit application was conducted in accordance with DEQ and U.S. Environmental Protection Agency (EPA) guidance and demonstrated that ambient impacts from facility-wide emissions of lead would not exceed National Ambient Air Quality Standards (NAAQS) and emissions of new TAPs would not exceed screening levels or acceptable ambient concentrations increments for TAPs.

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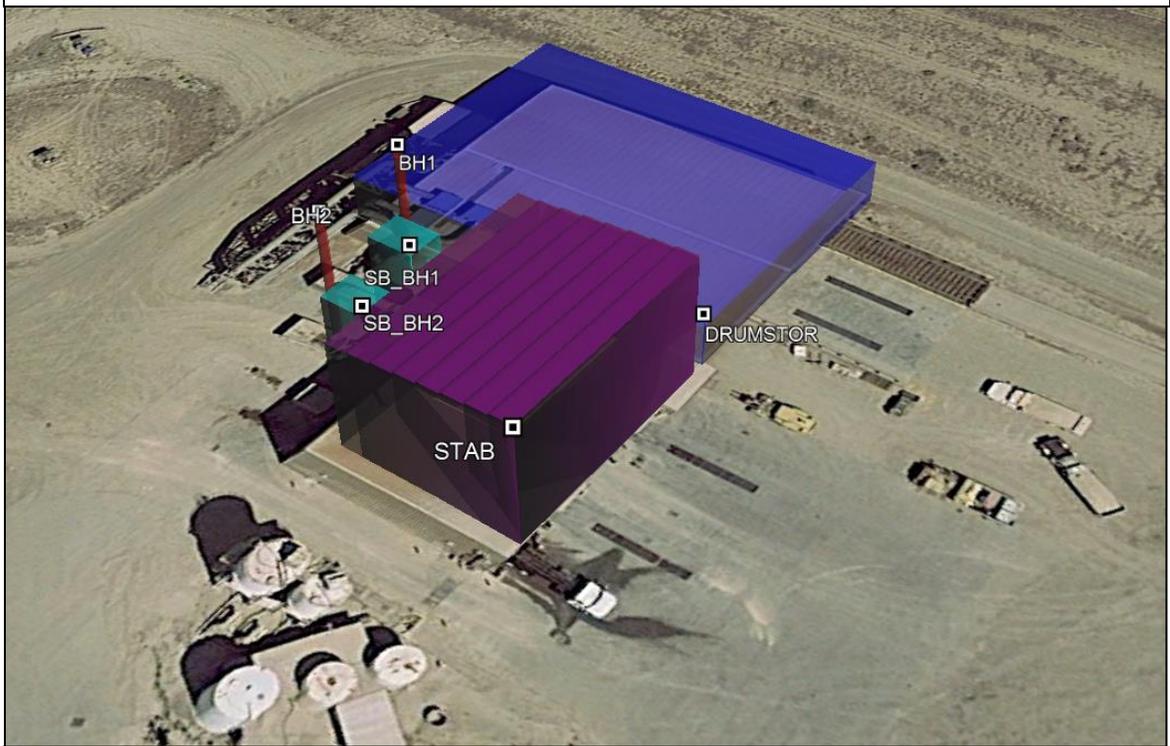
<sup>4</sup> IDAPA 58.01.01, Rules for the Control of Air Pollution in Idaho, accessible at <https://adminrules.idaho.gov/rules/current/58/580101.pdf>



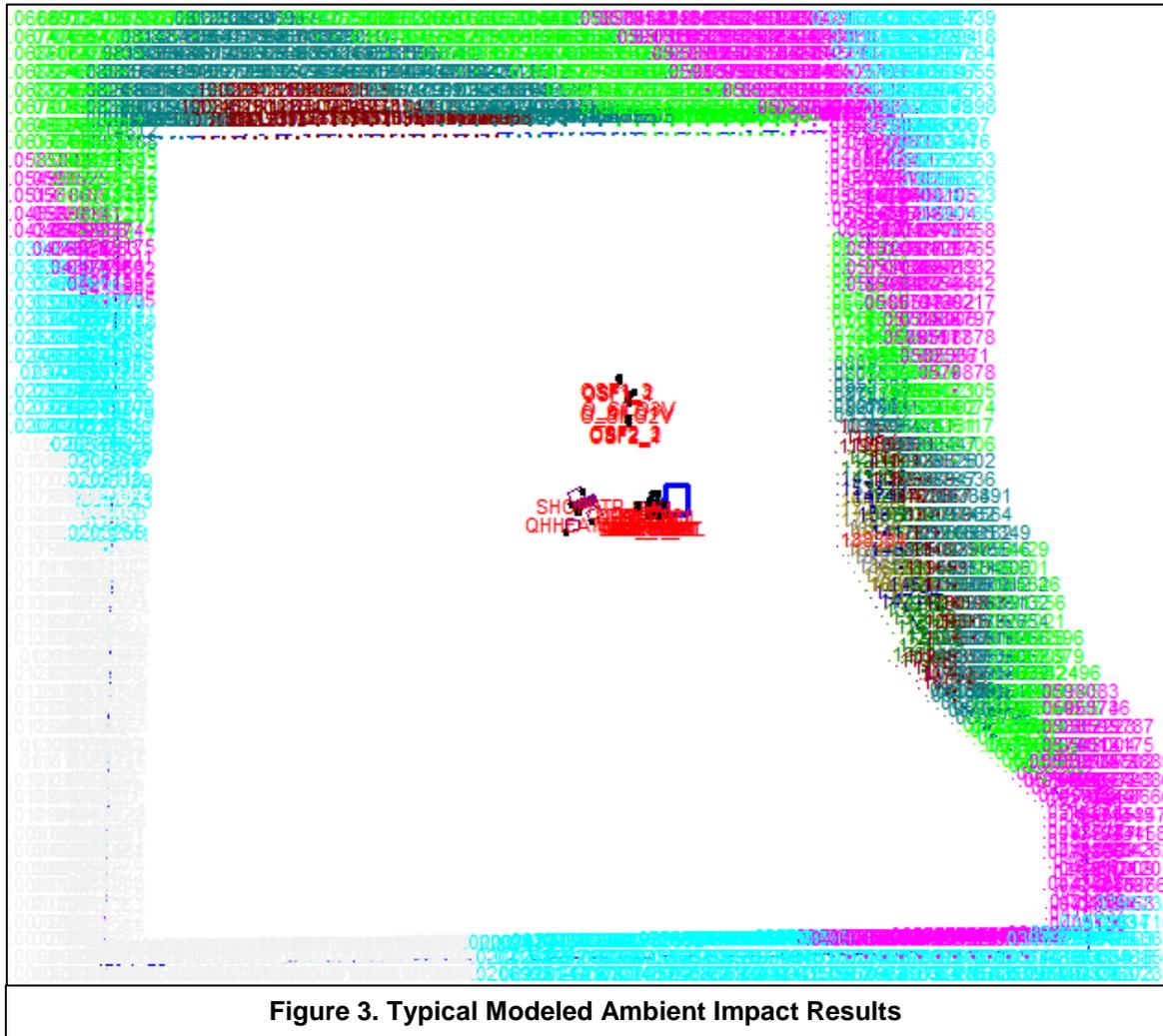
# Figures



**Figure 1. Grand View Facility Overview, July 2018**



**Figure 2. Proposed New Indoor Stabilization Building and Drum Storage Area, 2020**



**Figure 3. Typical Modeled Ambient Impact Results**

The dispersion modeling results clearly show the strong bi-directional wind flow pattern seen in this area (the computer model uses meteorological data from a five-year period). As shown in Figure 3, the maximum ambient impacts occur along the fence line on the north edge of USEI's Grand View site when winds are blowing from the southeast to the northwest, and on the east fence line near the entry gate when winds are blowing from the northwest to the southeast.

Ambient impacts drop off rapidly as the distance from the fence line increases. The colors denote modeled concentrations at ground level receptors. Impacts shown in light blue are five times lower than impacts shown in the brick red color and are 10 times lower than impacts shown in gray (a very narrow band on the fence line near where the maximum impacts occur). The maximum impacts shown in gray are below applicable health-based air quality standards.