

STOCKTON UNIVERSITY

ASBESTOS ABATEMENT CONTINGENCY PLAN

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**Environmental
Health and Safety Office**

EHS

ASBESTOS ABATEMENT CONTINGENCY PLAN

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ASBESTOS ABATEMENT CONTINGENCY PLAN

PURPOSE

This document provides procedures which shall be performed in Stockton University's facilities to minimize exposure to asbestos during Class I and Class II asbestos abatement projects when either the results of air monitoring reveal that levels exceed the criteria contained in this plan or when a failure in engineering controls is discovered.

BACKGROUND

The Occupational Safety and Health Administration (OSHA) has established the regulatory framework for protecting employees from exposure to asbestos. OSHA has defined Permissible Exposure Limits (PELs) for personal monitoring of airborne asbestos fibers as: a level of 0.1 fibers per cubic centimeter (f/cc), as an eight (8) hour Time Weighted Average (TWA), and a level of 1.0 f/cc as averaged over a thirty minute Excursion Limit. This contingency plan meets or exceeds OSHA mandates in unique operational environments and facility designs for the University. This plan is intended to be used in conjunction with other applicable regulations, asbestos management plans, and Stockton's model specifications entitled, "Stockton University's Asbestos Abatement Plan. (Attachment 3)"

This contingency plan will provide appropriate responses which are intended to minimize operational risks resulting from asbestos related incidents that may affect a facility's ability to provide normal services. Appropriate responses are triggered by area air monitoring results and visual indications to ensure that employees are not exposed above the OSHA permissible limits. This plan allows for any single area air monitoring result in the affected area to trigger response levels in that affected area. The provisions outlined in this plan are to be initiated whenever there is the potential to disturb asbestos as part of an abatement project. This could begin as early as the containment preparation phase, particularly when asbestos is or may be disturbed during construction of the containment.

Evacuation of facilities may be warranted due to an asbestos related incident. In those situations, this plan, used in conjunction with the facility's overall contingency and emergency plans, provides appropriate procedures for the orderly evacuation of the affected areas.

PROCEDURES OVERVIEW

Facilities are required to comply with this plan as well as OSHA standards and Stockton's directives/guidelines pertaining to respiratory protection, training, operations and maintenance (O&M), re-evaluation, notification, air monitoring, and contract specifications. The following items briefly discuss these requirements.

- Training:

All occupants of facilities containing or suspected to contain asbestos materials shall be adequately trained to become familiar with this contingency plan and their specific responsibilities. See Attachment 1 for recommended minimum training requirements.

- Operations and Maintenance (O&M):

Asbestos related incidents occurring in areas other than asbestos abatement project areas of the facility will be addressed in accordance with the instructions provided in the facility asbestos O&M plan.

- Re-evaluation:

This asbestos contingency plan shall be reviewed at least annually and updated for each project, if necessary.

- Notification:

A timely and thorough notification process is critical to the success of this contingency plan. Figure 1, Emergency Response Flow Chart, is the notification flow chart to be used for this contingency plan. A notification checklist is provided on the reverse side of each response level page. The purpose of the notification checklist is to ensure that the process is followed, and the notifications are documented. Refer to the Stockton University "Emergency Procedures Guide" for additional notification procedures. Document can be found at https://intraweb.stockton.edu/eyos/police/content/docs/Emergency_Procedures_Guide_optimized.pdf

When a Stockton employee discovers an unanticipated Class I or Class II asbestos abatement project in a Stockton owned facility, the employee shall immediately contact the emergency number 911. The Emergency Dispatch shall contact the appropriate departments (including the EHS Office) to initiate an investigation. If no air sampling results are available or if the results do not meet Stockton's requirements for air sampling, the EHS Office may initiate the Full Response evacuation and/or initiate outside work area air monitoring.

- Air Monitoring:

The third party certified industrial hygienist (CIH) and industrial hygienist (IH) will work with Stockton to develop an Air Monitoring Plan which will include locations and frequency of sampling. Monitoring will be performed in the asbestos abatement area, locations adjacent to the asbestos abatement areas, and in other affected areas (such as operational area).

Sampling will be performed continuously, 24 hours per day while an asbestos abatement project is in progress. Baseline samples will be collected at least 10-30 days prior to the start of abatement preparations and other abatement related work such as equipment mobilization. All fiber concentrations specified in this plan are based upon Phase Contrast Microscopy (PCM) analysis. Transmission Electron Microscopy (TEM) analysis may be used on a case-by-case basis as a decision making tool at the discretion and professional judgment of the third party CIH and IH.

If area monitoring shows that levels are expected to reach or exceed 0.1 f/cc, Stockton shall initiate personal monitoring on a selected number of people in an area where a full response has been initiated. The need to initiate personal monitoring and the number of personal monitors should be based on the third party CIH recommendation. Attachment 2, Air Monitoring, contains a more detailed description of the minimum air monitoring requirements.

- Contract Specifications:

The success of this plan is contingent upon the interfaces with the asbestos abatement and the outside contractor's monitoring specifications.

The award of the asbestos abatement contract must involve a thorough evaluation of these critical elements. Stockton will only employ accredited, qualified, and experienced asbestos abatement and environmental monitoring contractors.

If there are other construction related activities that will be performed in areas adjacent to the asbestos abatement areas that have the potential to affect the asbestos abatement area, those activities will be coordinated prior to the start of the project with the EHS Office and Facility Management.

RESPONSE LEVELS SUMMARY

STOP WORK LEVEL =

- ⇒ *Area sampling results greater than 0.02 f/cc Above Baseline Level (ABL) or*
- ⇒ *Loss of negative pressure or excessive negative pressure in the containment isolating the asbestos removal area, or*
- ⇒ *Water leakage from the containment*

- EHS directs the asbestos abatement contractor responsible for asbestos removal activity to stop work (non-emergency activity).
- Make appropriate notifications (see Figure 1: Emergency Response Flow Chart).
- Temporarily stop other suspect dust and fiber generating operations (non-emergency activity).
- Determine which work activities should stop both inside and outside the containment which isolates the asbestos removal area.
- Evaluate the situation to identify and correct potential sources of the problem.
- If a failure in engineering controls is discovered in the containment isolating the asbestos removal area, inform EHS or their designated representatives to identify personnel for possible release at the next response level.
- EHS may direct the contractor to resume work and notifies facility management that work has resumed.
- Once PCM readings indicate fibers are at or below 0.02 f/cc ABL, then the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

CAUTION (WARNING) LEVEL =

- ⇒ *Greater than or equal to 0.05 f/cc (absolute reading) is realized*

- Apply stop work procedures.
- Remove non-critical personnel from the affected areas.
- Prepare decontamination equipment for immediate use should the Full Response Level be reached. (Note: prepare at this level, means that the equipment should be moved to a readily accessible location.)
- Post appropriate signs at all entrances and exits for affected areas, as the situation warrants.
- Prepare to implement the approved air sampling plan.
- Review Full Response Plan.
- Immediately implement the full response level actions, if sampling results are reasonably expected to exceed 0.1 f/cc. This decision will be based on the situation and a collaborative discussion between Facility management or their designated representatives, EHS Office and the professional judgment of the project third party CIH and IH.
- Once PCM readings indicate fibers are at or below 0.02 f/cc ABL, then the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

FULL RESPONSE (EVACUATION) LEVEL =

- ⇒ *Reasonably expect to meet or*
- ⇒ *greater than or equal to 0.1 f/cc (absolute reading) or*
- ⇒ *gross contamination*
- ⇒ *Visible release from the containment*

- Stockton personnel and third party IH/CIH shall evaluate the path of egress and shall consider avoiding the evacuation of personnel through affected areas.
- All “stop work and caution levels” actions still apply.
- Set up the decontamination equipment and use during this response level.
- Implement an orderly evacuation of non-mission critical personnel from the affected area to a locally predetermined assembly point.
- Post appropriate signs at entrances.
- Evaluate situation to identify and correct potential source of the problem.
- Advise mission critical personnel to evacuate as soon as notifications are complete (not to exceed 30 minutes).
- Management or their designated representatives will implement the local evacuation plan for a safe hand-off of the air traffic operations.
- CIH/IH will implement the approved air sampling plan.
- EHS shall direct contractor to immediately initiate cleaning in the area of the high fiber level.
- Immediately begin reoccupancy strategy planning.
- Once PCM readings indicate fibers are at or below 0.05 f/cc, see Reoccupancy and Resumption of Normal Operations checklists.

REOCCUPANCY AND RESUMPTION OF NORMAL OPERATIONS=

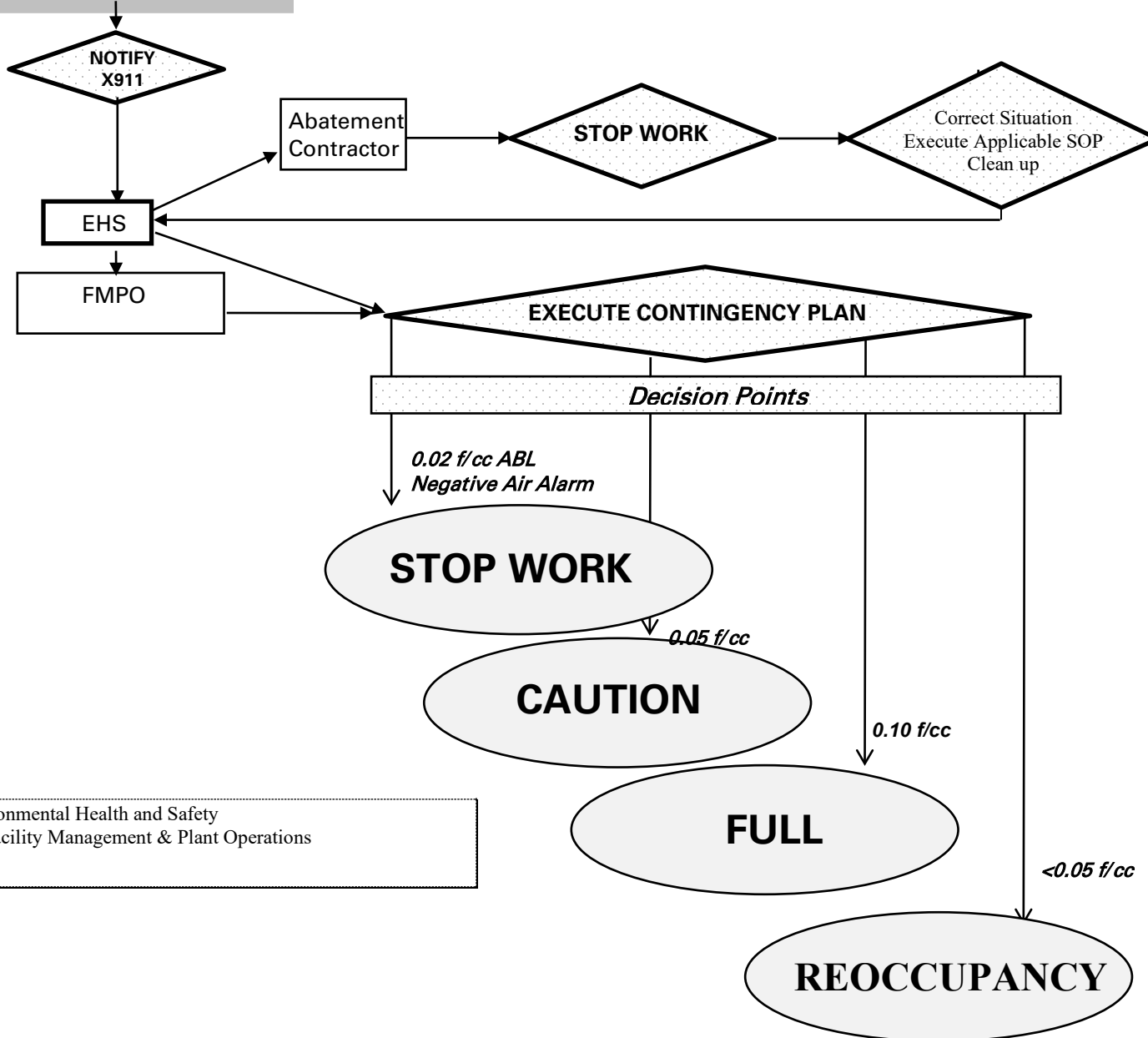
- ⇒ *less than 0.05 f/cc and levels are expected to decline*
- ⇒ *less than 0.02 f/cc ABL and levels are expected to decline*

- Evaluate situation to identify and correct potential source of the problem.
- CIH and IH will advise the EHS Office when the reoccupancy level has been reached and decontamination measures are complete.
- EHS or their designated representatives will coordinate the reoccupancy.
- Post appropriate signs at entrances.
- Once PCM readings indicate fibers are at or below 0.02 f/cc ABL, then the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

ACM Incident

High PCM/TEM
Visible release from the containment
Negative Air Alarm
Unintentional damage
Situations warranting STOP WORK
Discovery of unanticipated sponsor abatement projects

FIGURE 1: EMERGENCY RESPONSE FLOW CHART



LEVELS OF CONCERN - STOP WORK

STOP WORK LEVEL =

- ⇒ *Area sampling results greater than 0.02 f/cc Above Baseline Level (ABL) or*
- ⇒ *Loss of negative pressure or excessive negative pressure in the containment, isolating the asbestos removal area, or*
- ⇒ *Water leakage from the containment*

- EHS directs the asbestos abatement contractor responsible for asbestos removal activity to stop work (non-emergency activity).
- Make appropriate notifications (see Figure 1: Emergency Response Flow Chart).
- Temporarily stop other suspect dust and fiber generating operations (non-emergency activity).
- Determine which work activities should stop both inside and outside the containment which isolates the asbestos removal area.
- Evaluate the situation to identify and correct potential sources of the problem.
- If a failure in engineering controls is discovered in the containment isolating the asbestos removal area, inform EHS or their designated representatives to identify personnel for possible release at the next response level.
- EHS may direct the contractor to resume work and notifies facility management that work has resumed.
- Once PCM readings indicate fibers are at or below 0.02 f/cc ABL, then the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

Stop Work Level

If the third party CIH/IH determines that the STOP WORK level of 0.02 f/cc (PCM) ABL has been reached outside the asbestos removal area, the EHS Office will direct the asbestos abatement contractor and/or other construction contractors to STOP WORK. The integrity of all equipment and structures will be reviewed. The EHS Office will allow emergency activities to continue if shutting these operations down could present a health and safety risk/hazard.

Notification

The EHS Office or designee shall contact the FMPO or designee in the event that the STOP WORK level of 0.02 f/cc above baseline level has been reached. The FMPO will work with EHS, following local notification procedures.

Incident Evaluation

The EHS Office and asbestos abatement contractor will inspect the work area and review work practices to determine the cause of the increase in the fiber level, loss of negative pressure in the asbestos removal area, visible release or water leak. All deficiencies found will be immediately corrected.

Resumption of Normal Operations

Once PCM readings indicate fiber levels at or below 0.02 f/cc ABL, the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

Asbestos Abatement Contingency Checklist

All completed checklists shall be archived for at least the duration of the asbestos abatement project.

Initial	Time	STOP WORK LEVEL –Notification Procedures
		Environmental Health and Safety (EHS) or Designee Notification:
		Notify the Facilities Management and Plant Operations (FMPO) or designee when response level triggers are met.
		Notify additional representatives.
		Notify others as determined by local managers when response level triggers are met. NOTE: When there is no Facility Manager on site, the EHS Office shall be responsible for notifying the Facility Manager in a timely manner.
		<ul style="list-style-type: none"> • EHS directs the asbestos abatement contractor responsible for asbestos removal activity to stop work (non-emergency activity). • Make appropriate notifications (see Figure 1: Emergency Response Flow Chart). • Temporarily stop other suspect dust and fiber generating operations (non-emergency activity). • Determine which work activities should stop both inside and outside the containment which isolates the asbestos removal area. • Evaluate the situation to identify and correct potential sources of the problem. • If a failure in engineering controls is discovered in the containment isolating the asbestos removal area, inform management or their designated facility representatives to identify personnel for possible release at the next response level. • EHS may direct the contractor to resume work and notifies FMPO that work has resumed. • Once PCM readings indicate fibers are at or below 0.02 f/cc ABL, then the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

To be signed by FMPO and EHS upon completion of notification procedures detailed above.

Name	Date

LEVELS of CONCERN - CAUTION (WARNING) LEVEL

CAUTION (WARNING) LEVEL =

⇒ *Greater than or equal to 0.05 f/cc (absolute reading) is realized*

- Apply stop work procedures.
- Remove non-critical personnel from the affected areas.
- Prepare decontamination equipment for immediate use should the Full Response Level be reached. (Note: prepare at this level, means that the equipment should be moved to a readily accessible location.)
- Post appropriate signs at all entrances and exits for affected areas, as the situation warrants.
- Prepare to implement the approved air sampling plan.
- Review Full Response Plan.
- Immediately implement the full response level actions, if sampling results are reasonably expected to exceed 0.1 f/cc. This decision will be based on the situation and a collaborative discussion between FMPO, EHS or their designated representatives and the professional judgment of the project third party CIH and IH.
- Once PCM readings indicate fibers are at or below 0.02 f/cc ABL, then the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

Caution Level

If the third party CIH/IH determines that the CAUTION LEVEL of greater than or equal to 0.05 f/cc has been reached outside the asbestos removal area, the EHS Office will direct the abatement contractor and/or other construction contractors to STOP WORK. The integrity of all equipment and structures will be reviewed. The EHS Office will allow emergency activities to continue if shutting these operations down could present a health and safety risk/hazard.

Notification of Reaching the Caution Level

The EHS Office or designee shall contact the Facility Manager or their designee in the event that the CAUTION level of 0.05 f/cc ABL has been reached. EHS will also follow local notification procedures. Post the CAUTION ASBESTOS HAZARD (yellow) sign at entrances to areas with fiber levels greater than or equal to 0.05 f/cc.

Release of Non-Mission Critical Personnel

Facility Manager, in collaboration with the EHS Office shall evaluate the situation and release non critical personnel from the area.

Incident Evaluation

The EHS Office and asbestos abatement contractor will inspect the work area and review work practices to determine the cause of the increase in the fiber level, loss of negative pressure in the asbestos removal area, visible release or water leak. All deficiencies found will be immediately corrected.

Resumption of Normal Operations

When levels fall below 0.05 f/cc and are expected to decline, the caution levels are halted and the level of concern is downgraded to the STOP WORK LEVEL. Once PCM readings indicate fiber levels at or below 0.02 f/cc ABL, the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

Asbestos Abatement Contingency Checklist

All completed checklists shall be archived for at least the duration of the asbestos abatement project.

Initial	Time	CAUTION LEVEL –Notification Procedures
		Environmental Health and Safety (EHS) or Designee Notification:
		Notify the Facilities Management and Plant Operations (FMPO) or designee when response level triggers are met.
		Notify additional representatives.
		Notify others as determined by local managers when response level triggers are met. NOTE: When there is no Facility Manager on site, the EHS Office shall be responsible for notifying the Facility Manager in a timely manner.
		EHS Responsibilities:
		<ul style="list-style-type: none"> • Apply stop work procedures. • Remove non critical personnel from the affected areas. • Prepare decontamination equipment for immediate use should the Full Response Level be reached. (Note: prepare at this level, means that the equipment should be moved to a readily accessible location.) • Post appropriate signs at all entrances and exits for affected areas as the situation warrants. • Prepare to implement the approved air sampling plan. • Review Full Response Plan. • Immediately implement the full response level actions, if sampling results are reasonably expected to exceed 0.1 f/cc. This decision will be based on the situation and a collaborative discussion between facility management or their designated representatives, and the professional judgment of the project third party CIH and IH. • Once PCM readings indicate fibers are at or below 0.02 f/cc ABL, then the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

To be signed by FMPO and EHS upon completion of notification procedures detailed above.

Name	Date

LEVELS OF CONCERN - FULL RESPONSE (EVACUATION) LEVEL

FULL RESPONSE (EVACUATION) LEVEL =

- ⇒ Reasonably expect to meet or
- ⇒ greater than or equal to **0.1 f/cc** (absolute reading) or
- ⇒ gross contamination
- ⇒ visible release from the containment

- EHS and third party CIH/IH shall evaluate the path of egress and shall consider avoiding the evacuation of personnel through affected areas.
- All “stop work and caution levels” actions still apply.
- Set up the decontamination equipment and use during this response level.
- Implement an orderly evacuation of non-critical personnel from the affected area to a locally predetermined assembly point.
- Post appropriate signs at entrances.
- Evaluate situation to identify and correct potential source of the problem.
- Advise mission critical personnel to evacuate as soon as notifications are complete (not to exceed 30 minutes).
- Facility Manager or their designated representatives will implement the local evacuation plan.
- CIH/IH will implement the approved air sampling plan.
- EHS shall direct contractor to immediately initiate cleaning in the area of the high fiber level.
- Immediately begin reoccupancy strategy planning.
- Once PCM readings indicate fibers are at or below 0.05 f/cc, see Reoccupancy and Resumption of Normal Operations checklists.

Full Response Level

Implement an orderly evacuation when the third party CIH/IH determines that the FULL RESPONSE LEVEL of greater than or equal to 0.1 f/cc (PCM) has been reached or is reasonably expected to reach or exceed 0.1 f/cc (PCM) outside the asbestos removal area.

Notification to Evacuate

The EHS Office or designees will issue a General Information Bulletin to ALL personnel to orderly evacuate *only* the affected areas. Post ASBESTOS DANGER (red) signs at all entrances to areas where fiber levels are greater than or equal to 0.1 f/cc (PCM).

Personal Monitoring

This shall be initiated at the direction of the third party CIH/IH, per the approved air-monitoring plan.

Personnel Decontamination

If levels are above 0.1 f/cc (PCM), dry decontamination is mandatory, and wet decontamination will be performed at the option of the occupant. If a visible release results in direct contact with asbestos, a combination of dry and wet decontamination procedures will be followed.

Reoccupancy

Continue with Reoccupancy and Resumption of Normal Operations procedures. The third party CIH/IH will advise the EHS Office of the type and extent of cleaning to be initiated.

Asbestos Abatement Contingency Checklist

All completed checklists shall be archived for at least the duration of the asbestos abatement project.

Initial	Time	FULL RESPONSE (EVACUATION) LEVEL –Notification Procedures
		Environmental Health and Safety (EHS) or Designee Notification:
		Notify the Facilities Management and Plant Operations (FMPO) or designee when response level triggers are met.
		Notify additional representatives.
		Notify others as determined by local managers when response level triggers are met. NOTE: When there is no Facility Manager on site, the EHS Office shall be responsible for notifying the Facility Manager in a timely manner.
		EHS Responsibilities:
		<ul style="list-style-type: none"> • EHS and third party CIH/IH shall evaluate the path of egress and shall consider avoiding the evacuation of personnel through affected areas. • All “stop work and caution levels” actions still apply. • Set up the decontamination equipment and use during this response level. • Implement an orderly evacuation of non-critical personnel from the affected area to a locally predetermined assembly point. • Post appropriate signs at entrances. • Evaluate situation to identify and correct potential source of the problem. • Advise critical personnel to evacuate as soon as notifications are complete (not to exceed 30 minutes). • Facility Management or their designated representatives will implement the local evacuation plan. • CIH/IH will implement the approved air sampling plan. • EHS shall direct contractor to immediately initiate cleaning in the area of the high fiber level. • Immediately begin reoccupancy strategy planning. • Once PCM readings indicate fibers are at or below 0.05 f/cc, see Reoccupancy and Resumption of Normal Operations checklists.

To be signed by FMPO and EHS upon completion of notification procedures detailed above.

Name	Date

REOCCUPANCY AND RESUMPTION OF NORMAL OPERATIONS Following a Full Response Level

REOCCUPANCY AND RESUMPTION OF NORMAL OPERATIONS=

- ⇒ *Reoccupancy - less than 0.05 f/cc and levels are expected to decline*
- ⇒ *Resumption of Normal Operations - less than 0.02 f/cc ABL and levels are expected to decline*

- Evaluate situation to identify and correct potential source of the problem.
- CIH and IH will advise the EHS Office when the reoccupancy level has been reached and decontamination measures are complete.
- Facility Management or their designated representatives will coordinate the reoccupancy.
- Post appropriate signs at entrances.
- Once PCM readings indicate fibers are at or below 0.02 f/cc ABL, then the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

Reoccupancy Procedures

Affected Area Decontamination

Normal operations may resume when fiber levels are less than 0.05 f/cc, are expected to continue to decline and the affected area has been cleaned to the level recommended by the project CIH/IH.

Resumption of Normal Operations

Stockton employees may return to work when PCM fiber levels drop below 0.05 f/cc and levels are expected to continue to decline based upon collaboration between Facility Management, EHS, and the third party CIH/IH. Facility Managers will then direct the reoccupancy at their discretion. Once PCM readings indicate fiber levels are at or below 0.02 f/cc ABL, the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

Post the ALL-CLEAR (green) signs at entrances to areas that were previously regulated or restricted.

Post Event Analysis

A timely collaborative review by labor and management of the process will be performed to assess the effectiveness of the contingency plan and identify lessons learned for possible incorporation into the plan.

Asbestos Abatement Contingency Checklist

All completed checklists shall be archived for at least the duration of the asbestos abatement project.

Initial	Time	REOCCUPANCY AND RESUMPTION OF NORMAL OPERATIONS LEVEL - Notification Procedures
		Environmental Health and Safety (EHS) or Designee Notification:
		Notify the Facilities Management and Plant Operations (FMPO) or designee when response level triggers are met.
		Notify additional representatives.
		Notify others as determined by local managers when response level triggers are met. NOTE: When there is no Facility Manager on site, the EHS Office shall be responsible for notifying the Facility Manager in a timely manner.
		EHS Responsibilities:
		<ul style="list-style-type: none"> • Evaluate situation to identify and correct potential source of the problem. • CIH and IH will advise the EHS Office when the reoccupancy level has been reached and decontamination measures are complete. • Facility Management or their designated representatives will coordinate the reoccupancy. • Post appropriate signs at entrances. • Once PCM readings indicate fibers are at or below 0.02 f/cc ABL, then the EHS Office may direct the contractor to resume work and notifies facility management that work has resumed.

To be signed by FMPO and EHS upon completion of notification procedures detailed above.

Name _____	Date _____
_____	_____
_____	_____
_____	_____

PROCEDURES TO BE USED BETWEEN ABATEMENT WORK SHIFTS

Incidents may occur in the asbestos abatement and adjacent areas when the third party CIH/IH is not on site. Consequently, it is imperative that the facility begins appropriate responses upon discovery of an incident. There will be an Stockton Employee (EHS, Facilities Planning or other Stockton construction project oversight personnel) familiar with the facility and the abatement project who will be assigned responsibility for coverage, [24 hours a day][during asbestos abatement], during this period. Other construction and O&M activities may be performed at the facility between abatement work shifts. The third party CIH/IH shall be made aware of these projects by the EHS Office.

Facility Response

- Immediately contact the third party CIH/IH, upon discovery of an incident.
- Follow the notification process outlined in Figure 1, Emergency Response Flow Chart.
- Assess the integrity of the engineering controls.
- Isolate the affected area.
- Access to the isolated affected areas will be limited to respirator and medically qualified personnel.
- Immediately implement the Full Response Level Procedure when an incident involving gross contamination occurs.

Third Party CIH/IH Response

- Immediately respond to all calls or pages.
- Depending upon the severity of the situation, the third party CIH/IH will report to the site within one hour or resolve the situation over the phone with the facility contacts.
- The third party IH will apprise the third party CIH, as needed.

DEFINITIONS

<u>Abatement:</u>	Process of removing, enclosing, or encapsulating asbestos containing materials (ACM).
<u>ABL:</u>	Above Baseline Level.
<u>ACM:</u>	Asbestos Containing Material. Material containing greater than one percent of asbestos per Federal regulations.
<u>Adjacent area:</u>	Refers to areas in the facility that are contiguous to the asbestos removal area(s) or linked to the asbestos removal areas by some structural or mechanical system such the HVAC system.
<u>Airborne Asbestos Fiber:</u>	See PCM.
<u>Air Monitoring:</u>	Collecting samples of air for the purpose of determining the quantity of airborne fibers. Depending upon the method of analysis, either all fibers are counted, or only asbestos fibers.
<u>Asbestos:</u>	A naturally occurring mineral that when mined and processed, takes the form of small fibers which are usually invisible to the naked eye. The fibers are heat-resistant and extremely durable. The asbestiform (i.e. fibrous form) includes varieties serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, actinolite, and tremolite. For the purposes of this plan, the use of the term "Asbestos" refers to both confirmed and presumed asbestos containing materials (PACM).
<u>Baselines:</u>	Refers to the use of air sampling results representing project specific fiber levels during the proceeding 10 to 30 days of the abatement project start.
<u>Caution (Warning) Level:</u>	Refers to the actions necessary to prepare for the potential implementation of the full response level.
<u>Certified Industrial Hygienist (CIH):</u>	Means an industrial hygienist certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.
<u>CFR:</u>	Code of Federal Regulations.
<u>Disturb:</u>	Means the act of disrupting the matrix of asbestos such as crumbing, pulverizing or generating visible debris.
<u>Failure:</u>	Means that the devices and procedures to prevent fiber migration from the removal area have been jeopardized.

<u>Fibers Per Cubic Centimeter (f/cc):</u>	The unit of measure in which PCM analysis is reported.
<u>Full Response (Evacuation) Level:</u>	Refers to the implementation of actions necessary to protect occupants from exposure during an asbestos incident and safely coordinate hand-off of operations.
<u>Gross Contamination:</u>	The presence of significant amounts of visible ACM debris such as from a dislodged asbestos contaminated ceiling tile.
<u>High-Efficiency Particulate Air (HEPA) Filter:</u>	Means a filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.
<u>Industrial Hygienist (IH):</u>	Means a professional qualified by education, training, and experience to anticipate, recognize, evaluate and develop controls for occupational health hazards. For Stockton's facility asbestos abatement projects, the IH will work under the direction of the CIH.
<u>NIOSH 7402 TEM Method:</u>	The National Institute for Occupational and Safety and Health (NIOSH) analytical method for determining asbestos fibers by TEM analysis for personal samples collected in accordance with 29 CFR 1926.1101.
<u>Operational Area:</u>	Areas utilized for Stockton's campus operations (such as Boiler Rooms, Dormitories, etc).
<u>Personal Protective Equipment (PPE):</u>	Specialized equipment approved to protect employees from the risk of injury or illness by creating a barrier against workplace hazards. Typical types of PPE include: eye, face, head, foot, and hand protection.
<u>Phase Contrast Microscopy (PCM):</u>	This method of analysis is used for air samples which are required by OSHA for the determination of exposures to workers. PCM does not distinguish asbestos from non-asbestos fibers and counts fibers with 3:1 aspect ratios, and longer than 5 microns.
<u>Permissible Exposure Limits (PELs):</u>	PELS are OSHA regulatory limits on the amount or concentration of a substance in the air. Asbestos PELs: (1) An airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter of air as an eight (8) hour time-weighted average (TWA); (2) An airborne concentration of asbestos in excess of one fiber per cubic centimeter of air (1.0 f/cc) as averaged over a sampling period of thirty (30) minutes (Excursion Limit).
<u>Personal Monitoring:</u>	Sampling for airborne asbestos fiber concentration within the breathing zone of the asbestos abatement contractor or building occupants.
<u>Powered Air</u>	A type of respiratory protection which continuously supplies HEPA-filtered

<u>Purifying Hood (PAPH):</u>	air to an enclosed face piece or hood.
<u>Regulated Area:</u>	An area established by the employer to demarcate areas where airborne asbestos fiber concentrations exceed, or can reasonably be expected to exceed, the PEL.
<u>Respiratory Protection:</u>	A component of personal protective equipment, such as a Powered Air Purifying Hood (PAPH), which protects the user from breathing asbestos fibers.
<u>Respirator Qualified:</u>	Refers to those individuals having current medical evaluations and training in the use of respirators.
<u>Sponsor Owned Facility:</u>	Any facility in which Stockton employees work, maintain, operate or otherwise occupy.
<u>Stop Work Level:</u>	The airborne fiber level at which all abatement and other dust generating activities STOP.
<u>Transmission Electron Microscopy (TEM):</u>	Method used to analyze air samples to positively identify asbestos in air samples.
<u>Visible Release:</u>	A noticeable disturbance of ACM and PACM resulting either from accidental contact or other factors, such as pipe leaks or roof leaks.

**ATTACHMENT 1: RECOMMENDED MINIMUM
ASBESTOS TRAINING REQUIREMENTS**

Trainee	Minimum Requirements	Refresher training
Environmental Health and Safety (EHS)	40 hour supervisor Project Designer: if reviewing or preparing designs Facility Specific Training On the job training with trained EHS	8 hours annually
Managers or designees	4-8 hour Level I- Awareness Training Facility Specific Training	Annually as part of the occupant emergency plan briefing. Shall capture changes in conditions.
Occupants	<p>Level I – Awareness Training: This training is for all employees. Training typically will run from 2 to 4 hours and should include the following topics:</p> <ul style="list-style-type: none"> • Background information on asbestos • Health effects of asbestos • Overview of asbestos regulations • Location of asbestos containing material (ACM) in the building • Precautions for working around ACM • The O&M Plan for the building • Proper response to fiber release episodes (Asbestos Abatement Contingency Plan) • Personal Protective Equipment (PPE) • Hazard communication 	Annually as part of the occupant emergency plan briefing. Should capture changes in conditions.
O&M Personnel	Asbestos O&M training	Annual
Contractors	29 CFR 1926 EPA/NJDEP/N.J.A.C.	29 CFR 1926 EPA/NJDEP/N.J.A.C.

ATTACHMENT 2: AIR MONITORING

The following are the minimum critical requirements for air monitoring. Additional instructions are provided in the asbestos O& M plans.

Baseline Area Samples

- The baseline PCM area air samples shall be collected and reported to facility management 10 - 30 days prior to the project start and will only be valid for the duration of the project.
- TEM may be collected “side by side” with PCM air samples for possible future analysis.
- Area air sampling results from concurrent or recent asbestos abatement projects which are still considered to be representative can be used as baselines for new projects upon the recommendations of the third party CIH/IH.

Maximum Baseline

- If the results are greater than 0.01 f/cc the options are to pre-clean, re-sample, and establish new baseline less than 0.01 f/cc or the EHS Office will provide justification for approval.

Area Air Monitoring

- Representative area air monitoring will be performed per the Model Asbestos Abatement Specification for Environmental Monitoring Services.
- If the asbestos abatement area is not immediately adjacent to the operational area, there will be a minimum of 2 area air samples collected in that operational area.
- Low noise (high volume) air sampling pumps will be utilized in the operational areas.

ATTACHMENT 3: Stockton University Asbestos Abatement Plan

ASBESTOS ABATEMENT-BUILDING XXX, ROOM #XXX

1. The Contractor shall remove and dispose of approximately (state dimensions- -lineal feet, square feet, pipe insulation thickness, description of materials, etc. in Building XXX, Room #XXX, or room description).
2. The Contractor shall be a licensed asbestos removal firm in the State of New Jersey. The Contractor shall follow all Federal (including 29 CFR 1926.1101) and State Regulations (including NJAC 5:23 Subchapter 8) during removal, cleanup, and disposal. These requirements include the submittal of the EPA notification and DEP waste manifest to Stockton's EHS Office. As defined by NJAC 5:23-8:11, an "asbestos safety control monitor" shall be utilized for supervising and inspecting all work performed. The Contractor shall provide a copy of his current license at least two (2) weeks before work begins.
3. If floor tile removal- -The Contractor has the option of performing the floor tile/mastic/carpeting removal by hand or machine, utilizing appropriate enclosure procedures to prevent asbestos fiber release. It is recommended that electric heating devices/pry bars (or equivalent) be utilized to remove the floor tile in accordance with the "Recommended Work Practices for the Removal of Resilient Floor Coverings" as stated by the Resilient Floor Covering Institute. If other types of removal, state method (i.e. enclosure, glove bag, etc.).
4. The doors leading to each work area will remain shut and taped during the entire removal project. The Contractor shall utilize two layers of 6-mil polyethylene sheeting for containment of the work area.
5. The Contractor shall HEPA-vacuum each work area after asbestos removal work is completed.
6. The Contractor shall perform personal air monitoring to be conducted in accordance with 29 CFR 1910.1001 of the OSHA Regulations, on behalf of the Contractor's employees. The sampling shall be analyzed by means of Phase Contrast Microscopy (PCM). Results of the monitoring shall be returned within twenty-four (24) hours to the Stockton's EHS' office. If removal work is required to be performed off-hours or weekends, the Contractor shall utilize an "asbestos safety technician" to perform the required personal monitoring and sampling. The Contractor shall provide all qualified personnel and equipment to perform said monitoring.
7. The Contractor shall use a National Voluntary Lab Accreditation Program (NVLAP) lab for analytical work. This laboratory shall be licensed by the State of New Jersey and certified for the analytical procedures performed. Copies of said license shall be provided to Stockton's EHS Office at least two (2) weeks before work begins. The laboratory results shall include the laboratory's accreditation number.
8. If applicable, state reference to any drawings, sketches, which would show location(s) of asbestos, phase plan(s), etc.
9. The abatement project shall be inspected and monitored by Stockton personnel. Stockton's sampling schedule is as follows (analysis by means of "testing method- -PCM or TEM")- -

State number of samples to be taken for each Work Area...

All sampling results shall be returned within twenty-four (24) hours. If the results are not satisfactory, re-cleaning shall be performed at no cost to the Stockton. Containment installed for each phase shall not be removed until the sampling results for that area are satisfactory.

10. The Contractor shall submit to Stockton's EHS Office the list of their licensed removal workers to be utilized on this abatement project and copies of their current licenses at least two (2) weeks before work begins. The Contractor shall designate his "asbestos safety technician" with this submittal. At the same time, the Contractor

shall also submit an Asbestos Removal and Disposal Plan that addresses use of personal protective equipment with a respirator change out schedule, decon procedures, maintaining negative pressure in the abatement area, coordination for lockout/tagout of HVAC units, and all other requirements in the NJAC Code.

11. The Contractor shall submit to Stockton's EHS Office an abatement schedule at least two (2) weeks before work begins.
12. The Contractor shall obtain Pollution Legal Liability insurance with the minimum limits of \$2,000,000 combined single limit and \$4,000,000 aggregate. Written evidence should be in the form of a Certificate of Insurance and be forwarded to Stockton's EHS Office with the submittal requirements listed in Item #11.

OTHER CONDITIONS

1. The Contractor shall perform all work during the hours of 8:00 a.m. to 4:30 p.m., Monday through Friday, excluding Federal Holidays, unless an alternate work schedule is approved in advance by Stockton.
2. The Contractor shall notify the following organizations at least forty-eight (48) hours before work is to begin:
 - (a) John Fritsch, Assistant VP Facilities Management and Plant Operations
Phone: 609-626-6052
 - (b) Chris Corea, Associate Director EHS
Phone: 609-652-4496
 - (c) Amber Berry, Manager EHS
Phone: 609-626-6126
 - (d) Skip (Charles) West, Executive Director of Facilities Planning and Construction
Phone: 609-626-3551
3. Failure to make the proper external regulatory notifications as well as the internal notifications required by this document shall not entitle the Contractor to make claims against Stockton for delays, damages, or additional costs.
4. The Contractor shall perform all work required within XXX (xx) calendar days after receiving notice-to-proceed. The notice-to-proceed shall be issued following the 10-day notification to the DEP. A copy of this notification shall be provided to Stockton's EHS Office at this time.
5. One copy of the EPA Waste Manifest shall be forwarded to Stockton within five (5) calendar days after all work is completed.