

**CONTRACTOR NOTIFICATION LIST
ENVIRONMENTAL SAFETY AND HEALTH (ESH)
SPACE PARK, MANHATTAN AND REDONDO BEACH FACILITIES, CALIFORNIA**

Notification	ESH Point of Contact ^(a)	Documents sent to ESH ^(b)	ESH Time of Reporting or Responding ^(c)	Comments
Agency Visit	Christine Felger-Environmental Christine.Felger@ngc.com X32673	Investigation report within 5 days	Contractor immediately reports to security, Facilities Project Engineer (FPE) and to ESH.	Contractor obtains the regulator's business card and immediately provides to ESH. Report indicates what was inspected and if there are any corrective actions or violations.
Air Quality - Permit to Construct	Chijioke Akunyili - RB chijioke.akunyili@ngc.com x25105 Yijin Wang – MB Yijin.Wang@ngc.com X21333	Equipment List for SCAQMD permit determination.	Two weeks for ESH to review.	FPE must first obtain ESH approval <u>in writing</u> before initiating construction of equipment with emissions. ESH to provide written guidelines to the FPE what is allowed during preconstruction while the SCAQMD Permit to Construct is pending.
Asbestos Abatement	James Smith James.Smith@ngc.com X36291 Suzie So-alternate Suzie.So@ngc.com X23029	Survey report Work plan Training certifications	5 days for ESH to review. 5 days for ESH to review. Consultant to verify training records on site prior to initiating project.	Certified Cal/OSHA consultant collects sample(s) and ESH reviews survey report. Notify ESH for third party air monitoring consultant and at least 2 days prior to planned abatement date with name of the abatement contractor. If >100 square ft, contractor submits <i>Notification of Demolition or Asbestos Removal Form</i> within 10 working days of scheduled removal to SCAQMD. Regardless of amount, contractor notifies Cal/OSHA within 24 hours of removal. Contractor to contact the consultant with a start time. Abatement to start only in the presence of the certified consultant.
Confined Space	Russ Naranjo James.Naranjo@ngc.com X35657 James Smith-alternate James.Smith@ngc.com X36291	Confined space program, permit to be used as well as training, respirator (if applicable) and monitor calibration certification(s).	5 days for ESH to review. FPE to contact ESH 48 hours prior to entry.	FPE to verify if ESH has reviewed and accepted the program within a year. Submit training, calibration and respirator (if applicable) certifications regardless of last entry. Contractor to complete their own permit. Contact ESH to obtain Contractor Notification Tag (not a permit)
Crane Lift Helicopter Lift	James Smith James.Smith@ngc.com X36291	NGSS Crane Lift Plan and Checklist, Forms 8378, certificate of insurance. crane operator certification (>15,000 pounds or boom length >25 ft), load and rigging charts as well as the last annual and quadrennial crane certificates (> 3 tons) and notify Hawthorne Airport and Hawthorne ATCT if boom height is > 200 feet or within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with its longest runway more than 3,200 feet. Helicopter Lift plan and a Code of Safe Practices per Title 8 1901. Cal/OSHA permit-helicopter and certificate of insurance	4 days for ESH to review. Crane operator to complete the checklist on the day of and prior to the lift. Contractor to contact Hawthorne Airport 310.349.1637 and ATCT at 310.675.1010 within 3 days of crane lift.	FPE to ensure building is posted to exclude personnel in the building below the radius area of the lift. Contractor helicopter operator shall conduct a pre-briefing. Contractor to obtain permit from Cal/OSHA District Office for a helicopter lift. Certificate of Insurance to covers a minimum of 2 million general liability, 2 million automobile liability, \$100,000 workers compensation and employer liability Coverage B and statutory limits for Coverage A with a wavier of subrogation against Northrop Grumman and its subsidiaries, name Northrop Grumman as additional insured and certificate made out to Northrop Grumman Systems Corporation, 2890 Fairview Park, Falls Church, Virginia, 22042 and emailed to Cara.Watson@ngc.com.

Design Review	John Hagthrop John.Hagthrop@ngc.com X32670	Prints	5 days for ESH review.	ESH provides comment sheet to FPE prior to the review meeting.
Electrical Safety -Energy Control/ Lockout-Tagout	Russ Naranjo James.Naranjo@ngc.com X35657 James Smith-alternate James.Smith@ngc.com X36291	Electrical safety program for energy control per Title 8 2320.4 & 2714 as well as NFPA 70E Article 120. Authorized worker training records.	24 hours for ESH review.	FPE to verify if ESH has reviewed and accepted contractor program within a year. FPE to notify Facilities-Electrical Department of the work location at (310) 813-2773 (6:30 AM to 7 PM) or 310/678-2530.
Electrical Safety -Energized Work	Russ Naranjo James.Naranjo@ngc.com X35657 James Smith-alternate James.Smith@ngc.com X36291	Electrical Safety Program for energized work per Title 8 2320.2 & NFPA 70E, Articles 110 & 130. Contractor energized work permit. Qualified worker training records including 70E and CPR and First Aid (1910.269(b)(1)).	24 hours for ESH and Facilities Electrical Department to review.	All energized work is defined as greater than 50 volts. Justification for energized work must be accepted by ESH and additionally by Project Manager if construction related tasks. FPE to verify if ESH has reviewed and accepted program within a year. FPE to notify Facilities-Electrical Department of the work location at (310) 813-2773 (6:30 AM to 7 PM) or (310)678-2530.
Excavation and Trenching	James Smith James.Smith@ngc.com X36291	Excavation and Trenching Permit. Also include the Cal/OSHA Notification Form (annual permit) or Project Permit, Dig Alert Ticket no. and the 3 rd party survey report. Also identify competent person and provide training documentation from the company as indicated on the Excavation and Trenching Permit.	Notify ESH 48 hours in advance to review the Excavation and Trenching Permit. Contractor to contact ESH immediately if visual staining or detectable odors.	Contractor to follow ESH Excavation Protocol, including notifying Cal/OSHA if enter an excavation/trench 5 ft or greater. Contractor to mark area to excavate with white paint. Contractor to contact Dig Alert within 2 days of excavation to determine <u>public</u> utilities. Contractor to review facility drawings and verify with facilities the drawings. Contractor to hire a qualified 3 rd party subcontractor to determine approximate locations of <u>private/NGSS</u> underground installations (sewer, telephone, fuel, electric water lines, others). Excavation shall not commence until installations have been determined. Contact ESH if excavation within 10 feet of a high priority underground installation. Sloping or benching greater than 20 feet must be designed by registered PE. Support systems or shield systems using non-manufactures tabulated data must be designed by a registered PE as indicated on the Excavation & Trenching Permit. Implement South Coast AQMD Rule 1166 per the NGSS Space Park Excavation Protocol at the Manhattan Beach site if excavating with heavy equipment more than 1 cubic yard greater than 2 feet depth. Any excavation at the site will also require hiring a consultant and notifying South Coast AQMD at least 24 hours in advance. Any detectable odor or visual staining at any other location will require excavation to halt and AQMD Rule 1166 implemented.
Fall Protection	John Hagthrop John.Hagthrop@ngc.com X32670 James Smith-alternate James.Smith@ngc.com X36291	Fall Prevention Plan. Training and equipment inspection record.	2 days for ESH to review.	Excludes ladder only projects. Review submittals regardless of last project.
Fire Protection Acceptance Testing and Inspection	John Hagthrop John.Hagthrop@ngc.com X32670	None	2 days for ESH prior to testing and inspection.	Fire detection, alarm and notification systems will consist of a full function pre-test and final test. Fire sprinkler/suppression system inspection will consist of a hydrostatic test for two hours at 200 psi with no greater than a 5 psi drop over the two hours, a rough installation inspection prior to installing ceiling tiles and a final sprinkler inspection to verify installation and placement.
Generators (>=50 BHP)	Chijioko Akunyili - RB chijioko.akunyili@ngc.com x25105 Yijin Wang – MB Yijin.Wang@ngc.com X21333	Copy of the Permit and Registration placard – description of work to be performed.	2 days for ESH to review and possibly a few extra days if a new permit is required.	Contractor to comply with SCAQMD portable generator requirements. Review of generator purpose will need to be discussed prior to work to determine applicability.

Hazardous Materials (SDS)	Erin Harr Erin.Harr@ngc.com 310.813.0555 and Soraya Yoshikawa Soraya.Yoshikawa@ngc.com 310.332.3959	Contractor scans SDS individually and electronically submits with the Contractor Hazardous Material Request Form (KO-F038).	3 days for ESH to review.	Contractor to comply with the Contractor Hazardous Materials List. Contractor to ensure Form KO-F038 and SDSs are complete, legible and product MSDSs are the latest revision.
Hazardous Waste	Arlen Fuhrman Arlen.Fuhrman@ngc.com X35994	H&S Plan or JHA specific to project. Initial & refresher HAZWOPER training records as well as respirator certification-project specific. Complete Container Form on ESH website.	4 days for ESH to review and deliver or pick up containers.	FPE to contact Arlen Fuhrman for containers and labels. Only a qualified NGSS ESH can sign a hazardous waste manifest. FPE to complete EHS service request form to request containers and HW profile form to pick up waste containers. ^(d)
Hot Work	Marty Morisky Marty.Morisky@ngc.com X27071 James Smith James.Smith@ngc.com Alternate X36291	Hot Work Permit-use NGSS permit completed by NGSS point(s) of contact.	24 hours for ESH to complete at location of hot work.	Welding, cutting, grinding, brazing and soldering. Ensure fire watch on site and a equivalent to a 20 pound 20A-10BC fire extinguisher as well as hot work equipment is available for ESH to inspect prior to issuance of the permit.
Incidents	James Smith James.Smith@ngc.com X36291	Incident report within 5 days.	Contractor to immediately notify security, FPE and ESH. ESH to hold a meeting with contractors and NG representatives to discuss the incident report and corrective actions. A decision of any further action will be made by the NG review team.	Incidents include a serious near miss, first aid, OSHA recordable and spills over 5 gallons or 50 pounds. Reports should include when, who, what where and why as well as the root cause and responsible personnel with corrective actions and appropriate due dates. Contractor reports fatalities, serious injuries and illnesses requiring hospitalization in excess of 24 hours, dismemberment or permanent disfigurement (Title 8 342) to Cal/OSHA District office within eight hours.
Infractions	James Smith James.Smith@ngc.com X36291	Statement from the contractor within 24 hours. Include the date, time, contract company, infraction description, root cause and corrective action signed by the contractor, supervisor and the general contractor-if applicable.	ESH will respond to the FPE within 8 hours of the reported infraction.	Infractions include unsafe acts, unsafe conditions, unauthorized use of hazardous materials, releases of hazardous materials and other findings not in compliance with Space Park Safety and Environmental Rules for Contractors (Form 7847). Repeat infractions observed by the contractor or singly observed by ESH or other employee (assumes unreported infractions) is cause for the FPE to schedule a meeting within 3 business days of the receiving the statement/ESH notification and will include the contract facilities manager, procurement and ESH along with the contractor, superintendent (or project manager or owner) and the general contractor-if applicable to determine whether further action is warranted.
Job Hazard Analysis or Safety Plan	James Smith James.Smith@ngc.com X36291 Russ Naranjo James.Naranjo@ngc.com X35657	Job Hazard Analysis or Safety Plan	3 days for ESH review.	Job Hazard Analysis required unless otherwise directed by ESH. A template is posted in OASIS. Health and Safety Plan required on subsurface soil investigations and any hazardous material clean-up projects.
Lead Abatement	James Smith James.Smith@ngc.com X6291	Analytical report Work plan Training and respirator certifications	5 days for ESH to review. 5 days for ESH to review. Consultant to verify training records prior to lead abatement.	ESH or certified contractor collects samples and ESH reviews laboratory results. Notify ESH of the certified contract consultant and at least 2 days prior to planned abatement with name of the abatement contractor. Contractor to notify Cal/OSHA District office 24 hours of work if concentration above 0.5% (5,000 ppm), > 100 square feet; excludes torch cutting or welding for less than one hour. Contractor to contact certified consultant of the start time. Abatement shall start only in the presence of certified consultant.
Local Exhaust Ventilation (LEV) Systems	Angelica Torres Angelica.Torres@ngc.com X29907	New LEV design and list of chemicals requiring exhaust. Commissioning report/ Air Balance report to validate design criteria is met	5 days for ESH review of commissioning report. 5 days to certify LEV.	Contact ESH prior to job walk and collaborate with ESH during design and construction. Commissioning (air balance) report needs to be submitted to ESH prior to certification of either new LEV or modified LEV systems. LEV must be certified by ESH prior to use.

Microbial growth (Suspect)	Marty Morisky Marty.Morisky@ngc.com X27071 John-Paul Angulo John-Paul.Angulo@ngc.com Alternate x24804	Work plan	Upon receipt to the FPE. 5 days for ESH to review. 5 days for ESH to review.	Contact ESH to attend job walk. Contact ESH to determine if a certified consultant is required to collect samples during the abatement If sampling required, ESH to reviews the laboratory results. Contractor to contact certified consultant of the start time. Certified consultant to provide over-site during abatement. Abatement shall only start in the presence of the certified consultant.
Noise-Local ordinance Noise-Above 70 decibels	Angelica Torres Angelica.Torres@ngc.com X29907 Suzie So-alternate Suzie.So@ngc.com X23029		Contractor posts City permit prior to work. Contractor posts warning signs at the work area prior to work. Contractor notifies ESH within 24 hours.	Consider facility and community exposures as well as noisy tasks to be done during off hours and weekends.
Radiation sources for inspection	Chesten Chong Chesten.Chong@ngc.com X20627	Radiation program Training certification	5 days for ESH to review.	X-ray machine and other radioactive machines.
Respirable Crystalline Silica	James Smith James.Smith@ngc.com X36291	Written exposure control plan Project specific Work Plan Training certification Respirator certification	5 days for ESH to review.	For task identified in Table 1 of 1926.1153, the contractor shall implement engineering controls, work practices and respiratory protection as identified in Table 1. Personal air monitoring will be required if reasonably expected to exceed the action level of 25 ug/m ³ Task not specified in Table 1 will still require engineering controls.
Sewer Repair	James Smith James.Smith@ngc.com X36291	Abbreviated Exposure Control Program Hepatitis A Training records	3 days for ESH to review.	FPE to verify with ESH if have reviewed and accepted program in the year.
Scaffolds	James Smith James.Smith@ngc.com X36291	Cal/OSHA Notification Form and Permit (annual or project). Approved engineering drawings by a CA registered engineer will be required for special duty scaffolds, wooden pole scaffolds greater than 60 feet, metal pole scaffolds greater than 125 feet, interior hung or powered platforms/mask climbers.	48 hours prior to assembly.	Submit Cal/OSHA permit and notification form to ESH if a supported scaffold is greater than 36 feet high. Submit approval drawing if scaffold requires design approval by a CA registered engineer. All scaffold assembly and disassembly shall be green tagged by the qualified person. ESH to inspect scaffold if NG will be utilizing the scaffold prior to use.
Scopes of Work	John Hagthorp John.Hagthorp@ngc.com X32691 James Smith-alternate James.Smith@ngc.com X36291	SOW and any attachments	3 days for ESH to review.	Comments are sent to the FPE.
Utility Outage – by Public Utility Service Utility Outage-- by a Contractor or Facilities	John Hagthorp John.Hagthorp@ngc.com X32691 James Smith-alternate James.Smith@ngc.com X36291	Mitigation Plan Form 6482	5 days for ESH to review. 24 hours to log and notify GAPS insurance carrier of the impairment. 72 hours for facilities to respond.	Public utility repairs for electric, gas, water or fire systems. All of above utilities including the smoke alarms.

Footnotes:

- (a) Except for hot work permits, the contractor point of contact is the Facilities Project Lead (FPL) or Facilities Maintenance. Contractor correspondences with ESH will be electronically by the FPL or Facilities Maintenance contact. The facilities point of contact may conduct a work area audit. The FPE is to submit requests electronically to ESH.
- (b) Documents must be reviewed and accepted by the ESH point of contact prior to the start of the type of notification or the project. It is the responsibility of the FPL or facilities maintenance to obtain written ESH acceptance prior to initiation of the task.
- (c) The time of review by the ESH point of contact is typical and may be less time in a justifiable emergency or more time if the data submitted is incomplete. If the point of contact is out of the office, contact Neeltje Mack x26142 to resolve the conflict. Time excludes weekends, holidays and off Fridays.
The task shall not be initiated until submittals are received, ESH review is complete and ESH notifies the FPE in writing the task is acceptable to proceed.
- (d) Form is at <http://eprocesses.st.northgrum.com/hr/ehs/index.cfm?FuseAction=home.page&PageID=2538&SiteSectionID=0>